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# BOTANICAL MUSEUM LEAFLETS

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# ERRATA

I:2, line 1
for **Marcarthurii** read **Macarthurii**

I:10, line 22
for **Sorghum vulgare** *L.* read **Sorghum vulgare** *Pers.*

I:11, line 15
for **Tipuana tipu** (*Benth.*) *Hubbard & Rehder comb. nov.* read **Tipuana tipu** (*Benth.*) *Lillo apud Stuntz* in Invent. Seeds & Pls. Introd. no. 31 (1914) 88 (Bur. Pl. Indust.)

VIII:1, line 3
for *Epidendrum viejii* read *Epidendrum vieji.*

VIII:5, line 4
for Izabel read Izabal

VIII:5, lines 11 and 12
for Guatemalen read Guatemalan

IX:2, line 25
for *P. ruscifolia* (Sw.) R.Br. read *P. ruscifolia* (Jacq.) R.Br.

IX:8, line 16
for STELIS NUBIA *Ames* read STELIS NUBIS *Ames*

# BOTANICAL MUSEUM LEAFLETS
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CAMBRIDGE, MASSACHUSETTS, JUNE 7, 1932 — No. 1


# NOMENCLATORIAL NOTES
## ON PLANTS GROWING IN THE BOTANICAL GARDEN OF THE ATKINS INSTITUTION OF THE ARNOLD ARBORETUM AT SOLEDAD, CIENFUEGOS, CUBA


BY

F. TRACY HUBBARD AND ALFRED REHDER


In preparing a list of the plants growing in the botanical garden at Soledad, several instances of nomenclatorial difficulty have been revealed. Ordinarily the new combinations made necessary by the transfer of a name from one genus or from one specific name to another are clear without further explanation, but in some cases the nomenclature has become so involved that it has seemed advisable to discuss it.

The following notes are issued in order to publish those new combinations which are necessary and to clarify those points which seem involved and uncertain.

**ACTINOPHLOEUS** *Beccari* in Ann. Jard. Bot. Buitenz. 2 (1885) 126, *in textu*.

Beccari in Malesia 1 (1877) 42 originally characterized the group as a subgenus of *Drymophloeus* Zipp. The spelling of the subgeneric name is *Actynophloeus*.

The species cultivated in the garden is:

**Actinophloeus Marcarthurii** *(H. Wendl.) Beccari* apud Wigman in Bull. Dépt. Agric. Indes Néerl. no. 31 (1909) 1, *nomen* — Beccari in Webbia 4 (1913) 154 — Radermacher in Ann. Jard. Bot. Buitenz. 35 (1925) 12. [The first complete description of the species].

*Kentia Macarthuri* Hort. apud Belg. Hort. 27 (1877)241, *nomen* (as Mac Arthuri) — H. Wendland apud T. Moore in Florist & Pomol. 1879 (Aug. 1879) 115, text cut — H. Wendland apud Ill. Gartenz. 23 (Dec. 1879) 265, t. 36.

*Ptychosperma Macarthurii* H. Wendland apud Kew Rept. 1882 (1884) 55.

This species, nomenclaturally, has had a complicated history. Originally introduced about 1877, it was placed in the genus *Kentia* and was described (rather inadequately) in 1879. Later it was transferred to *Ptychosperma*. In horticulture it has been frequently cultivated under both names, but usually as *Kentia Macarthuri*. In 1913 Beccari removed it to *Actinophloeus* where we believe it more correctly belongs.

**Brachychiton populneus** *(Schott & Endl.) R. Brown* in Bennett Pl. Jav. Rar., pt. 3 (1844) 234.

*Sterculia diversifolia* G. Don in Loudon, Hort. Brit. (1830) 392, *nomen* — G. Don, Gen. Syst. Gard. & Bot. 1 (1831) 516, non Brachychiton diversifolius *R. Brown* in Bennett Pl. Jav. Rar. pt. 3 (1844) 234 which is Sterculia caudata *Heward* in Herb. Cunn. apud Bentham, Fl. Austral. 1 (1863) 230.

*Poecilodermis populnea* Schott & Endlicher, Melet. Bot. (1832) 33.

Following Engler and Prantl and recent authors it has seemed best to accept the genus *Brachychiton* Schott & Endl. It is not, however, possible to apply the earl-

iest specific name "*diversifolia*" on account of the earlier *Brachychiton diversifolius* R. Br. Robert Brown's binomial undoubtedly refers, as pointed out by Bentham (Fl. Austral. 1 (1836) 230) to *Sterculia caudata* Heward in Herb. Cunn.

Consequently the oldest available specific name is "*populnea*" based on *Poecilodermis populnea* Schott & Endl. and the correct combination is *Brachychiton populneus* (Schott & Endl.) R. Br.

**CALADIUM** *Ventenat*, Descr. Pl. Nouv. Jard. Cels, livr. 3 (1801) t. 30 and in Roem. Archiv. Bot. 2 (1801) 347.

In discussing this genus, W. F. Wight (in Safford in Contrib. U.S. Nat. Herb. 9 (1905) 208) advanced the idea that *Caladium* Vent. applied to the genus commonly known as *Colocasia* Schott. The basis of his argument was that Ventenat drew his generic name from Rumphius who used this name for certain species of *Arum*. This is undoubtedly true. Starting with this premise, Wight argues that the only species common to both Rumphius and Ventenat is "*esculentum*", which is likewise the fact.

Granted the truth of both statements, we cannot agree with Wight's deduction that *Caladium* Vent. must apply to that part of the material included in the genus typified by "*esculentum*". In the first place, from the point of view of Ventenat's genus the governing factor is what did he describe, not the source from which he drew the generic name. The generic description seems broad enough to cover both types of plants included in his subsequent list of species composing the genus. However, the species to which he refers throughout the text and which he illustrates is *C. bicolor* and no mention of "*esculentum*" is made until at the end he sums up those species of *Arum* which he believes belong

to the genus.

Ventenat's treatment of *Caladium* in Roemer Archiv für die Botanik follows the same course, discussing *C. bicolor* and at the end mentioning "*esculentum*".

Consequently, we feel that the standard species of *Caladium* is *C. bicolor* and not *C. esculentum* as advocated by Wight and accepted by certain recent authors.

**CATHARANTHUS** *G. Don*, Gen. Syst. Gard. & Bot. 4 (1838) 95.

*Lochnera* Reichenbach, Consp. Reg. Veg. (1828) 134, non Lochneria *Heist.*, non Lochneria *Scop.*

On account of the earlier uses of the name *Lochnera* Reichb. must be replaced by *Catharanthus* G. Don. Dalla Torre and Harms (Gen. Siphon. fasc. 6 (1904) 406) are obviously in error when they refer *Catharanthus* G. Don to *Vinca* L. as Don treated but two species — *C. pusillus* and *C. roseus* — both of which are included in *Lochnera* by Engler and Prantl.

The transfer of the plant known both as *Vinca rosea* L. and *Lochnera rosea* Reichb. was made by G. Don (Gen. Syst. Gard. & Bot. 4 (1838) 95).

The synonymy of the two varieties of this species growing in the garden is:

**Catharanthus roseus** (L.) *G. Don* var. **albus** *(Sweet) G. Don*, Gen. Syst. Gard. & Bot. 4 (1838) 95.

*Vinca rosea* L. var. *alba* Sweet, Hort. Brit. (1827) 274.

**Catharanthus roseus** *(L.) G. Don* var. **ocellatus** *(Sweet) G. Don*, Gen. Syst. Gard. & Bot. 4 (1838) 95 *(sphalmate occellatus)*.

*Vinca rosea* L. var. *ocellatus* Sweet, Hort. Brit. (1827) 274.

*Vinca rosea* L. var. *oculata* W. Miller in L. H. Bailey, Cycl. Am. Hort. 4 (1902) 1935.

**Colocasia esculenta** *(L.) Schott* var. **antiquorum** *(Schott) Hubbard & Rehder, comb. nov.*

*Colocasia antiquorum* Schott in Schott & Endlicher, Melet. Bot. 1 (1832) 18.

Authors in general, who separate this variety from the species, have made it the species and have reduced *C. esculentum* (L.) Schott to varietal rank. While there is hardly any doubt that var. *antiquorum* is the phylogenetic type of the species, it is nomenclaturally inadmissible to reduce an older specific name to varietal rank under a name of later date of publication. In consequence the ranks must be reversed and *C. esculenta* become the species with a variety *antiquorum*.

**Dipteryx panamensis** *(Pittier) Hubbard & Rehder, comb. nov.*

*Coumarouna panamensis* Pittier in Contrib. U. S. Nat. Herb. 18 (1917) 236.

The genus *Dipteryx* Schreb. is conserved over *Coumarouna* Aubl. The transfer of this species makes a new combination.

**Gardenia jasminoides** *Ellis* in Phil. Trans. 51, pt. 2 (1761) 935.

*Varneria augusta* Stickman in Linnaeus, Amoen. Acad. 4 (1759) 136, *nomen.*

*Gardenia florida* Linnaeus, Sp. Pl., ed. 2 (1762) 305.

*Gardenia augusta* Merrill, Interp. Rumph. Herb. Amb. (1917) 50, 485, 547.

Merrill undoubtedly went too far when he accepted Stickman's *Varneria augusta* as valid publication. According to the International Rules, it can only be considered as a nomen nudum as the Rhumphius reference given is to a plate lacking analytic details and furthermore at the time of publication the genus to

which the species belonged was undescribed.

**Gliricidia sepium** *(Jacq.) Walpers*, Repert. Bot. Syst. 1 (1842) 679 — Standley in Contrib. U. S. Nat. Herb. 23 (1922) 482.

*Robinia Sepium* Jacquin, Enum. Pl. Carib. (1760) 28.
*Robinia maculata* Humboldt Bonpland & Kunth, Nov. Gen. et Sp. 6 (1824) 393 (Quarto ed.), 309 (Folio ed.).
*Lonchocarpus sepium* De Candolle, Prodr. Syst. Nat. 2 (1825) 260.
*Lonchocarpus maculatus* De Candolle, Prodr. Syst. Nat. 2 (1825) 260.
*Robinia variegata* Schlechtendal in Linnaea 12 (1836) 301.
*Gliricidia maculata* Walpers, Repert. Bot. Syst. 1 (1842) 679.
*Gliricidia Lambii* Fernald in Bot. Gaz. 20 (1895) 533.

There has been considerable difference of opinion as to the authority to be given for the combinations *Gliricidia sepium* and *Gliricidia maculata*. According to Index Kewensis 1 (1895) 1033, "H. B. & K. Nov. Gen. et Sp. vi. 393 in nota" [Quarto ed.] is given as the place of publication of both combinations. Neither combination, however, was made in either the quarto or folio edition of Humboldt Bonpland and Kunth, Nova Genera et Species Plantarum. . . or in Kunth, Syn. Pl. 4 (1825) 81.

Urban, Symb. Antill. 2 (1900) 288, and other authors refer both combinations to Steudel, Nomenel. Bot. ed. 2, 1 (1840) 688. While both combinations exist there, they are distinctly synonyms and are cited as being made by Kunth [HBK.]. Consequently, as they are published in synonymy, they have no valid standing.

The earliest actual publication of the combinations which we have been able to find is in Walpers, Repert. Bot. Syst. 1 (1842) 679.

**Maranta gibba** *Smith* in Rees Cycl. 22 (1819) no. 2.
*Maranta divaricata* Roscoe, Mondr. Pls. (1828) t. 7.
K. Schumann in Engler, Pflanzenreich IV. 48 (Heft 11) (1902) 126 cites *M. gibba* Sm. in Rees in synonymy under *M. divaricata* Rosc. It is evident that Schumann had no knowledge of the date of issue of volume 22 of Rees Cyclopedia as he fails to cite the year. It contains the earliest name of the species.

**PHOENICOPHORIUM** *H. Wendland* in Ill. Hort. 12 (Feb. 1865) Misc. 5 and (May 1865) t. 433.
*Stevensonia* Duncan, Cat. Roy. Bot. Gard. Mauritius (1863), *nomen* — L. H. Bailey, Gentes Herb. 2 (1930) 192.
*Stephensonia* Hort. apud Van Houtte in Fl. des Serres 15 (May 20, 1865) 177, *in synon.*

We are unable to agree with the deductions of Prof. L. H. Bailey in Gentes Herbarum 2 (1930) 192 and,– in agreement with H. C. Skeels (in Bull. Torr. Bot. Cl. 58 (1931) 49), – we cannot accept his reasoning that the generic name *Phoenicophorium* should be outlawed. There is no provision in the International Rules that we feel could be construed to cover the case.

The genus *Phoenicophorium* was proposed and well described by H. Wendland in Illustration Horticole 12 (Feb. 1865) Misc. 5 and later illustrated by him in the same periodical (May 1865) t. 433. Apparently Prof. Bailey has overlooked the date of publication of the Miscellanées when he states, "A portrait of the palm appeared in L'Illustration Horticole bearing date April 1865, . . ." The footnote date on page 5 of the Miscellanées is Février 1865 and we can find no reason why this date should not be accepted.

The generic name *Stevensonia* was first published by James Duncan in 1863 (Cat. Roy. Bot. Gard. Mauritius). It is a nomen nudum. Furthermore we are not able to agree with Prof. Bailey that Van Houtte in Fl. des Serres 15 (May 20, 1865) 177, t. 1595-1596 published or even intended to publish a generic description under *Stevensonia*. The fact that *Phoenicophorium* was used as the page heading and as the title entry in the Table des matières on the back cover of the Livraison with *Stevensonia grandifolia* Dunc. in italics and clearly in synonymy convince us that Van Houtte was considering the species as a *Phoenicophorium*. Moreover the date of publication of the "Onzième livraison du tome XV" is clearly given on the cover of the copy in the Gray Herbarium, which is bound with the covers in place, as "Paru le 20 Mai 1865".

We are therefore unable to accept *Stevensonia* Dunc. as the generic name.

The species cultivated in the garden is:

**Phoenicophorium Borsigianum** *(C. Koch) Stuntz* in Invent. Seeds & Pls. Introd. no. 31 (1914) 88 (Bur. Pl. Indust.).

*Astrocaryum aureo-pictum* Hort. apud Verschaffelt, Cat. Ill. no. 12, misc. page 5 (fide Van Houtte in Fl. des Serres 15 (1865) 177, *in synon.*) — Verschaffelt, Cat. Ill. no. 74 (1864) 12, *nomen.*

*Astrocaryum Borsigianum* C. Koch in Wochenschr. Gärt. u. Pflanzenk. 2 (Dec. 22, 1859) 401 — C. Koch apud Regel in Gartenfl. 10 (1861) 29.

*Areca Sechellarum* Hort. apud C. Koch in Wochenschr. Gärt. u. Pflanzenk. 2 (1859) 401, *mention.*

*Astrocaryum Borsigii* Hort. apud C. Koch in Wochenschr. Gärt. u. Pflanzenk. 2 (1859) 402, *mention.*

*Astrocaryum aureo-punctatum* Lemaire in Ill. Hort. 6 (Dec. 1859) in nota sub t. 229, *nomen.*

*Stevensonia grandifolia* Duncan, Cat. Roy. Bot. Gard. Mauritius (1863), *nomen.*
*Stephensonia grandifolia* Hort. Veitch apud Proc. Roy. Hort. Soc. Lond. 4 (1864) 134, *nomen.*
*Phoenicophorium Sechellarum* H. Wendland in Ill. Hort. 12 (Feb. 1865) Misc. 5 and (May 1865) t. 433.
*Stevensonia Sechellarum* Hort. apud Van Houtte in Fl. des Serres 15 (May 20, 1865) t. 1595-1596, *in synon.*
*Astrocaryum pictum* Hort. apud Balfour f. in Baker Fl. Mauritius (1877) 388, *in synon.*
*Stevensonia Borsigiana* L. H. Bailey, Gentes Herb. 2 (1930) 192.

**Poinciana pulcherrima** *L.* var. **flava** (*Hort.* apud L. H. Bail. & Rehd.) *Hubbard & Rehder, comb. nov.*

*Caesalpinia pulcherrima* Sw. var. *flava* Hort. apud L. H. Bailey & Rehder in L. H. Bailey, Cycl. Am. Hort. 1 (1900) 206.

The combination for this horticultural variety has never been made under *Poinciana.*

**SALACCA** *Reinwardt* in Syll. Ratisb. 2 (1825) 3.
*Zalacca* Rumphius, Herb. Amb. 5 (1747) 113, t. 57, fig. 2 — Reinwardt apud Blume in Roemer & Schultes, Syst. Nat. 7, pt. 2 (1830) 1334.
*Salakka* Reinwardt apud Blume, Cat. Gew. Buitenz. (1823) 112, *nomen.*

The oldest valid post-Linnean spelling of the generic name is *Salacca* of Reinwardt, and from the standpoint of Latin it is also more correct than *Zalacca.*

The species involved is:

**Salacca edulis** *Reinwardt* in Syll. Ratisb. 2 (1825) 3.
*Calamus Zalacca* Gaertner, De Fruct. et Sem. Pl.

2 (1791) 267, t. 139.
*Salakka edulis* Reinwardt apud Blume, Cat. Gew. Buitenz. (1823) 112, *nomen.*
*Zalacca edulis* Reinwardt apud Blume, Roemer & Schultes, Syst. Nat. 7, pt. 2 (1830) 1334.
*Zalacca Blumeana* Martius, Hist. Nat. Palm. 3 (1838) 201, t. 123; t. 159, fig. 3.

**SORGHUM** Moench, Meth. (1794) 207.

The recent trend has been to conserve *Holcus* L. for *Holcus lanatus* L. and to place *H. halepensis* L. and *H. Sorghum* L. in *Sorghum* Moench.

In doing this, two new combinations are made necessary, namely:

**Sorghum vulgare** *Pers.* var. **caffrorum** *(Thunb.) Hubbard & Rehder, comb. nov.*

*Holcus Caffrorum* Thunberg, Prodr. Pl. Cap. 1 (1794) 20.
*Sorghum Caffrorum* Beauvois, Agrost. (1812) 131, 164, 178.
*Holcus Sorghum* L. var. *caffrorum* L. H. Bailey, Gentes Herb. 1 (1923) 133.

**Sorghum vulgare** *L.* var. **Durra** *(Forsk.) Hubbard & Rehder, comb. nov.*

*Holcus Durra* Forskål, Fl. Aegypt.-Arab. (1775) 174.
*Andropogon Sorghum* Brot. subsp. *sativus* Hack. [var.] *Durra* Hackel in De Candolle, Monogr. Phan. 6 (1889) 516.
*Sorghum Durra* Stapf in Prain, Fl. Trop. Afr. 9 (1917) 129.
*Holcus Sorghum* L. var. *Durra* L. H. Bailey, Gentes Herb. 1 (1923) 132.

The synonymy of the varieties of *Sorghum vulgare* is very involved and the identity of many varietal names

is, at present, not well known. Consequently, although evidence tends to lead one to believe that "*caffrorum*" and "*Durra*" are not the oldest varietal names for these forms, it has seemed advisable to retain them until a more complete study of the species has been made.

**Talinum paniculatum** *(Jacq.) Gaertn.* forma **variegatum** (*Hort.* apud W. Mill.) *Hubbard & Rehder, comb. nov.*

*Talinum patens* Willd. var. *variegatum* Hort. apud W. Miller in L. H. Bailey, Cycl. Am. Hort. 4 (1902) 1767.

The combination for this horticultural form does not appear to have been made previously under *T. paniculatum.*

**Tipuana tipu** *(Benth.) Hubbard & Rehder, comb. nov.*

*Machaerium Tipu* Bentham in Hook Journ. Bot. & Kew Gard. Misc. 5 (1853) 267.

*Tipuana Tipa* Lillo, Contrib. Conoc. Arbol. Argent. (1910) 58.

Lillo in transferring this species to *Tipuana* elected to use the other and possibly more correct spelling of the vernacular name. In consequence the adoption of Bentham's earlier specific name necessitates a new combination.

# BOTANICAL MUSEUM LEAFLETS
## HARVARD UNIVERSITY

CAMBRIDGE, MASSACHUSETTS, JUNE 29, 1932 — No. 2


# A NEW EPIDENDRUM FROM SPANISH HONDURAS


BY

OAKES AMES


From Mr. J. B. Edwards, who has been collecting in the vicinity of San Juancito, Honduras, there has been received a species of Epidendrum which appears to be undescribed. It is closely related to *E. arbuscula* Lindl. differing from it in both vegetative and floral characters. The unbranched stems, linear-lanceolate leaves, shorter floral bracts and pedicels, and the somewhat smaller flowers in a paniculate rather than racemose inflorescence are conspicuous differentiating characters. In *E. arbuscula* the naked portion of the peduncle is very short and stout, while in the new species the peduncle below the flowers is elongated and very slender.

**Epidendrum Edwardsii** *Ames, sp. nov.*

Herba terrestris. Radices albidae, glabrae, carnosae. Caules plus minusve erecti, foliosi, foliis distichis lineari-lanceolatis, infra folia vaginis persistentibus arcte adpressis. Pedunculus elongatus, satis gracilis, basi bractea scariosa vaginanti instructus. Inflorescentia laxe paniculata, pauciflora. Sepala similia, oblonga, acuta, patentia. Petala spathulata, acuta. Labellum

trilobatum, columnae adpressum et cum ea in tubum adnatum; lobi laterales subdolabriformes, margine irregulariter denticulato; lobus medius subsimilis, emarginatus cum apiculo obtuso interjecto; discus prope apicem columnae conspicue bicallosus, per medium leviter carinatus. Columna sectionis.

Plant 4.5–6 dm. high. Roots whitish, smooth, coarsely fibrous. Stems slender, erect, about 4 mm. in diameter near the base, concealed by the tubular closely appressed sheaths with which the leaves are articulated. Leaves numerous, distichous, the lower ones 3–6 cm. long and 1 cm. wide, lanceolate, acute, their sheathing bases 3.5–5.5 cm. long, tinged with violet-purple, the upper ones up to 16 cm. long, 1–1.7 cm. wide, linear-lanceolate, acute, chartaceous when dry, 1.5–2 cm. apart on the stem. Inflorescence erect, subpaniculate, terminal, 6.5–12 cm. long. Peduncle with the rachis 5.5–11 cm. long, provided with one or more sheathing acute scarious bracts. Flowers 5 to 7, fleshy. Pedicels about 8 mm. long, smooth, slender. Bracts of the panicle 3.5–10 mm. long, usually much shorter than the pedicels, linear to triangular, strongly concave. Ovary about 5 mm. long, smooth. Lateral sepals 10–11 mm. long, 2.75 mm. wide, oblong, acute, spreading, margins strongly revolute. Dorsal sepal similar, 12 mm. long, erect. Petals 11–11.5 mm. long, 2–3 mm. wide, spatulate, acute. Labellum distinctly 3-lobed, including the basal part that is adnate to the column 11–12 mm. long; free portion up to 8 mm. long, 10 mm. wide across the lateral lobes, with a more or less clearly defined central keel on the upper surface, and with 2 hemispherical complanate calli on the disc in front of the apex of the column; lateral lobes sub-dolabriform, about 5 mm. wide with an irregularly dentate or crenulate margin; middle lobe up to 11.5 mm. wide, about 3.5 mm. long,

emarginate with a blunt apicule, margin entire, undulate or sometimes sparsely dentate. Calli 1.5 mm. long, 1 mm. high. Column 6 mm. long, very slender toward the base, dilated upward; margin of the clinandrium dentate, tinged with purple.

REPUBLIC OF HONDURAS, Department of Tegucigalpa, Vicinity of San Juancito, old lumber road at Rosario. Terrestrial on exposed rocky ledges at 5000 feet altitude. Sepals and petals white to pale pink; lip white with purple dot. February 14, 1932. *J. B. Edwards 122.* (TYPE in Herb. Ames No. 37891.)

# TWO NEW ORCHIDS
## FROM YUCATAN AND TRINIDAD

BY

OAKES AMES AND CHARLES SCHWEINFURTH

Among orchids sent to us for identification there are two undescribed species, a *Pleurothallis* submitted by the Field Museum of Natural History and an *Epidendrum* collected by W. E. Broadway. These may be characterized as follows:

**Pleurothallis yucatanensis** *Ames & Schweinfurth, sp. nov.*

Herba epiphytica, pusilla. Rhizoma repens, caulibus numerosis brevissimis ornatum. Folia oblanceolata, apice rotundato minute bilobulata. Racemi laxiflori, pauciflori. Flores pusilli. Sepala lateralia anguste lanceolata, uninervia Sepalum dorsale majus, lanceolatum, concavum. Petala triangulari-linearia. Labellum oblongum, apice late rotundatum, parte inferiore leviter dilatata. Columna apice alato-dilatata.

Plant very small, up to 5 cm. tall, epiphytic, recalling *P. sertularioides* Lindl. Rhizome creeping, entirely invested by imbricating scarious nervose sheaths. Roots fibrous, glabrous, stout for the plant. Stems very short, approximate, ascending, unifoliate, about 2.5 mm. long, when young entirely invested by imbricating tubular scarious sheaths. Leaf oblanceolate, 8 15 mm. long, about 2.8 3.5 mm. wide, broadly rounded at the apex with a minutely bilobed apiculate tip, gradually narrowed to a 1-jointed petiole, very rugose in the dried specimen. Inflorescence conspicuously surpassing the leaf, solitary, about 3 cm. tall; peduncle capillary, adorned below the middle with one close tubular sheath; racemes very lax, 2 to 5 flowered. Floral bracts loose, infundibuliform,

twice or thrice surpassed by the slender ascending pedicels. Flowers small, segments of the perianth subparallel, slightly thickened toward the apex. Lateral sepals free, narrowly lanceolate, 2.5 mm. long, 1- or obscurely 3-nerved, acute, carinate on the outer side. Dorsal sepal slightly longer, lanceolate, about 2.8 mm. long, obtuse, concave, obscurely 3-nerved. Petals linear-triangular, 2.5 mm. long, 1-nerved, acute, slightly oblique. Labellum much shorter, simple, very shortly clawed; lamina oblong or lanceolate-oblong in outline with the erect sides of the lower half slightly dilated from a cuneate base, about 1.4 mm. long, broadly rounded at the apex, 3-nerved, minutely auriculate at base. Column short, almost 1.2 mm. long, with an abrupt quadrate wing on either side of the upper half, extended in a foot. Anther cupuliform.

*Pleurothallis yucatanensis* suggests *P. sertularioides* Lindl., but differs in having racemose inflorescences and simple lip.

MEXICO, Yucatan, Campeche, Tuxpeña, *C. L. Lundell 912*, November 8, 1931. Common on tree trunks and old logs. (TYPE in Herb. Ames No. 37882).

**Epidendrum Broadwayi** *Ames & Schweinfurth, sp. nov.*

Herba humilis, epiphytica. Caules caespitosi, tenuiter subclavati, omnino velati, mono-vel diphylli. Folia anguste linearia, graminea, acuta. Inflorescentia singula, quam folia multo brevior, laxe racemosa. Sepala lateralia oblique elliptico-lanceolata, apice conspicue carinato-mucronata. Sepalum dorsale oblanceolato-oblongum. Petala oblanceolato-linearia. Labellum apici columnae adnatum, trilobatum, lobo terminali majore subquadrato triangulari-acuto vel retuso et apiculato.

Plant small, epiphytic, up to 17 cm. tall, closely related to *E. tipuloideum* Lindl. Stems approximate, slenderly subclavate, about 4 5.5 cm. high, altogether invested by close tubular scarious sheaths which waste into fibres, one- or commonly two-leaved at the apex, rugose in the dried state. Leaves narrowly linear, up to 11.7 cm. long and 4.2 mm. wide (generally much shorter), acute, the mid-nerve more or less prominently sulcate above and carinate beneath. Inflorescence much shorter than the leaves, the longest scape about 4.5 cm. high, clasped at the base by a loose tubular sheath which is up to 1.6 cm. long. Raceme loosely 4 to 7 flowered. Floral bracts minute, lanceolate, membranaceous, many times exceeded by the slender pedicels. Pedicellate ovary up to 1.3 cm. long, laxly spreading. Flowers large for the plant, yellow in the dried specimen, rather fleshy in texture. Lateral sepals obliquely elliptic-lanceolate, prominently adnate to the column at the base, 11 mm. long, 3.2 4 mm wide, dorsally carinate-mucronate at the tip, prominently 7-nerved near the base. Dorsal sepal oblong-elliptic or oblanceolate-oblong, about 10 mm. long, 3.1 3.7 mm. wide, acute, conspicuously 7 nerved below. Petals oblanceolate-linear, 8.6 9.3 mm. long, more or less oblique, acute, 3 nerved. Labellum adnate to the apex of the column, 3 lobed; lamina about 5.1 5.5 mm. long from the center of the cordate base to the tip, about 6.4 mm. wide when expanded, bicallose at base; lateral lobes semiovate or rounded, obtuse, extending to about half the length of of the lip, erose on the margins; terminal lobe much larger, irregularly subquadrate, with a prominent triangular acute apex, or retuse and apiculate. Column stout, about 6.2 mm. long, dilated above. Anther broadly ovoid. Pollinia 4, complanate-ovoid.

*Epidendrum Broadwayi* is very similar in habit to

*Epidendrum tipuloideum* Lindl., but it has a dissimilar anterior lobe of the lip and 3–nerved petals. The flowers also are apparently of a different color, being yellow in the dried specimen.

TRINIDAD, North coast, Saut d'Eau *W. E. Broadway 7444*, January 18, 1931. Grows in tufts on a tree. (TYPE in Herb. Ames No. 37893).

# ON THE IDENTITY OF KIRSANNA

BY

F. TRACY HUBBARD

In September 1930 Dr. C. S. Coon of the Peabody Museum submitted specimens of seed for identification under the name of Kirsanna. These had been collected for him in Morocco by Gordon Browne in the Valley of the Iherrushen where they are grown by the Tribe of Gzennaya, Rif.

The following notes of economic interest in regard to this seed were furnished by Dr. Coon. In the Rif the seeds are used for making bread after they have been thoroughly soaked to extract the poisonous element which they contain. They are placed in flat wicker baskets and weighted down in streams and allowed to remain until the poisonous element is judged to be removed. In the Rif the Berber vernacular name of the seed is Shasanna and the Arabic name is Kirsanna. Dr. Coon further states that the name of the seed in Armenia is Kushna and that it is used there for feeding cattle after the poisonous element has been removed by soaking.

After several unsuccessful attempts the seed was finally grown to maturity at the Botanical Garden and proves to be *Vicia Ervilia* (L.) Willd.

# BOTANICAL MUSEUM LEAFLETS
## HARVARD UNIVERSITY

CAMBRIDGE, MASSACHUSETTS, JULY 28, 1932 — No. 3


# AN EXTENSION OF RANGE FOR EPIDENDRUM RHYNCHOPHORUM


BY

OAKES AMES


THE MEXICAN ORCHIDS published by A. Richard and H. Galeotti, in Annales des Sciences Naturelles in 1845, and described with exasperating brevity, (the average length of the descriptions hardly exceeding three lines of print), have been a source of perplexity for students of the Mexican flora. Several of the species are known only through the type specimens in the herbarium of the Muséum d'Histoire Naturelle de Paris. Among the extremely rare orchids is *Epidendrum rhynchophorum*. This species was originally described as follows: "Pseudobulbis ovoideis 1-phyllis; folio oblongo-lanceolato, acuto; flor. luteis, racemo 4–5 floro: labello trilobo, adnato, lobis lateralibus truncatis, intermedio angusto-lineari."

Very recently, while collecting for the Arnold Arboretum in the Department of Comayagua, Honduras, Mr. J. B. Edwards found *Epidendrum rhynchophorum* in full flower in May. It has seemed worth while to publish an account of Mr. Edwards' specimens and by means of a drawing, to remove the ambiguity caused by Richard and Galeotti's inadequate description.

The extension of range from Mexico to Comayagua,

Honduras, is remarkable, but in this regard it has been found that several Mexican orchids extend to Comayagua, indicating that intensive exploration may prove that many more may be characterized by a wider range than has been thought probable.

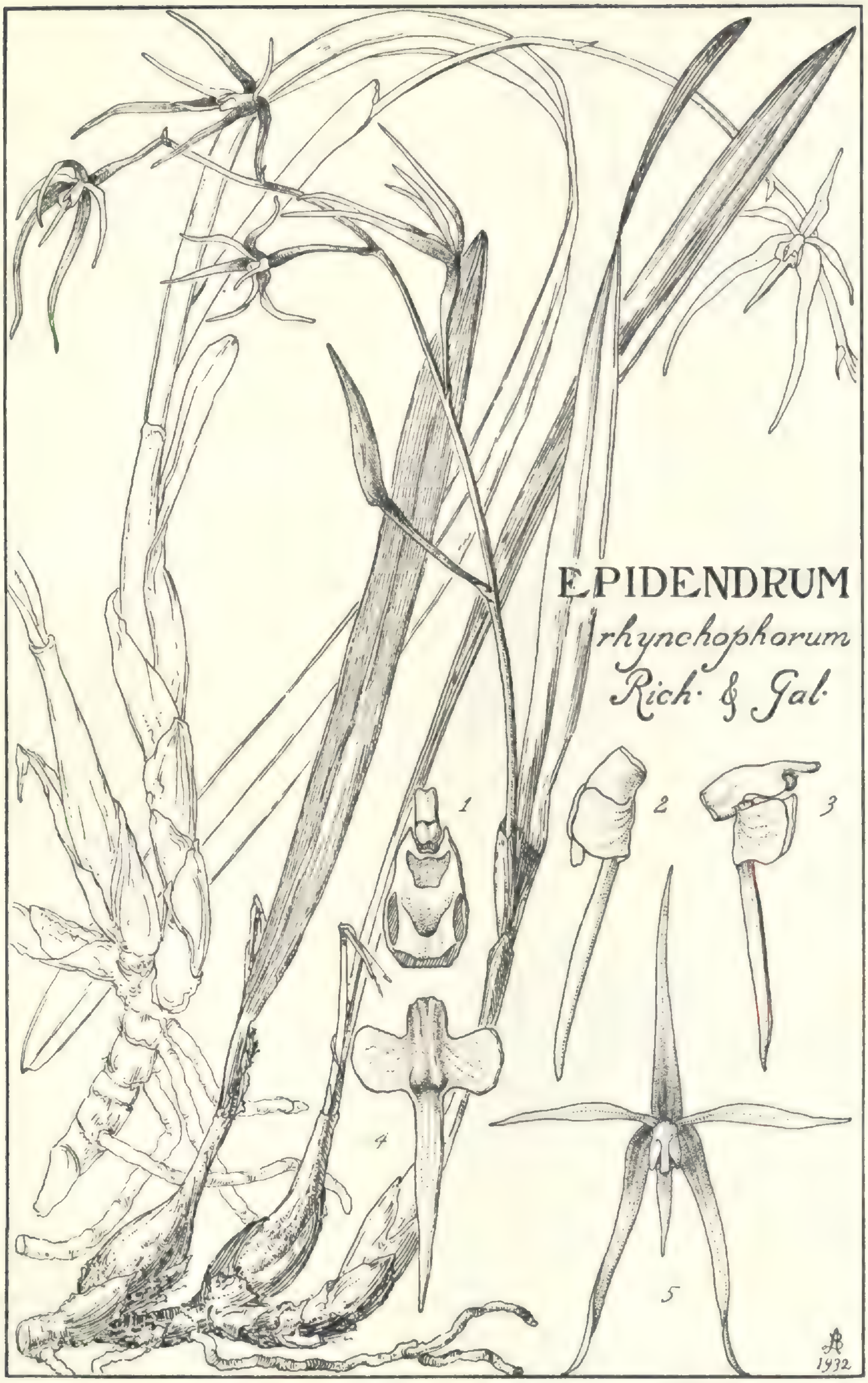
In the original description, *Epidendrum rhynchophorum* is referred to the section Encyclium, although the plants are described as being pseudobulbous with a divided labellum adnate to the column. John Lindley, when he prepared his monograph of Epidendrum for his Folia Orchidacea, placed the species in the section Aulizeum where it seems properly to belong. In conformity with the characters laid down for Aulizeum the labellum is adnate to the lower half of the column, with the lateral lobes erect and concealing the anther.

The following description has been prepared from dried specimens, and flowers preserved in alcohol.

**Epidendrum rhynchophorum** *A. Rich. & Gal.* in Comptes Rend. Acad. Sci. Par. 18 (1844) 305, 512, *nomen;* in Ann. Sci. Nat. ser. 3, 3 (1845) 20.

Epidendrum rhynchanthum *Schltr.* in Beihefte Bot. Centralbl. 36, abt. 2 (1918) 467 *sphalm.*

Rhizome stout, prorepent, emitting coarse, fibrous roots. Pseudobulbs approximate on the rhizome, 3–5.5 cm. long, lageniform, slender or sometimes much swollen, monophyllous, when immature completely concealed by ample, tubular sheaths. Leaves 13–26 cm. long, up to 1 cm. wide, linear-oblong, unequally bilobed at the apex. Peduncle terminal, 7–9 cm. long below the raceme, slender with an elongated, spathaceous sheath at base in the axil of the leaf; raceme 6–12 cm. long, loosely 3–7-flowered, with the flowers 1.3–2.5 cm. apart. Bracts of the raceme squamiform, about 3 mm. long. Pedicels with the ovary 1.5–2 cm. long, glabrous. Flowers brownish near the base of the sepals, otherwise yellowish


EPIDENDRUM
rhynchophorum
Rich. & Gal.
1
2
3
4
5
1932

or yellowish green with the lateral lobes of the labellum whitish. Sepals about 2.5 cm. long, scarcely 2 mm. wide, directed obliquely forward, linear-triangular, acute. Petals similar, about 1.5 cm. long, 3-nerved. Labellum up to 13.5 mm. long, conspicuously three lobed, adnate to the lower half of the column; mid-lobe up to 9 mm. long, about 1 mm. wide, linear, tapering gradually toward the acute tip; lateral lobes about 3 mm. long and 2.5 mm. wide, rotundate-dolabriform, erect, appressed to the apex of the column; disc conspicuously bicallose, the calli papilliform. Column stout, about 5 mm. long, adnate for about one half its length to the labellum, with a conspicuous terminal rostriform appendage which is dorsal, porrect and blunt.

MEXICO, Vera Cruz, on the parasitical Andromeda at 4,000 feet, *Galeotti 5077*. (TYPE in Herb. Mus. d'Hist. Nat. Par.).

REPUBLIC OF HONDURAS, Department of Comayagua, Las Jaguas in the vicinity of Minas de Oro. Epiphyte in open mountain forest, at 4,200 feet altitude. Flowers yellow and brown. May 3, 1932. *J. B. Edwards 143.*

## EXPLANATION OF ILLUSTRATION

Plant drawn natural size from Honduran specimens (*Edwards 143*). 1, front view of column showing the rostriform dorsal appendage exceeding the anther. 2, side view of labellum in natural position. 3, side view of labellum and column with the labellum depressed to show point of attachment. 4, labellum with the lateral lobes spread out. 5, the flower drawn to show the relative proportions of the sepals, petals and labellum.

# BOTANICAL MUSEUM LEAFLETS
## HARVARD UNIVERSITY

CAMBRIDGE, MASSACHUSETTS, FEBRUARY 7, 1933 No. 4


## A NEW OCTOMERIA FROM SPANISH HONDURAS


BY

OAKES AMES


AMONG ORCHIDS recently collected in Honduras by Mr. J. B. Edwards a new species of Octomeria has been recognized. There are no close allies of this species among the Octomerias recorded as natives of Central America. It is in habit similar to the Brazilian *O. brevifolia* Cogn. from which it differs in the size and form of the labellum. From dried specimens it appears to belong to the section of the genus characterized by semiterete leaves.

**Octomeria hondurensis** *Ames, sp. nov.* Herba epiphytica, parva, caespitosa, caulibus gracilibus teretiusculis. Folium subcylindraceum, leviter arcuatum, valde carnosum. Flores satis numerosi, densiusculi, fasciculati. Sepala oblongo-lanceolata, subacuta, trinervia. Petala similia. Labellum distincte trilobatum; lobis lateralibus erectis; lobo medio oblongo, apice tridentato; disco prope basim bicarinato. Columna generis.

Epiphytic herb about 10 cm. high. Stems caespitose, terete, 8-9 cm. long, several-jointed, with fibrous remains of sheaths adhering near the base, monophyllous, about 1 mm. in diameter when dried. Leaf about 2.5 cm. long, about 1 mm. in diameter, semiterete, acute, lightly sul-

OCTOMERIA
Hondurensis
Ames

cate above, much exceeding the inflorescence. Peduncles 5 mm. long, fasciculate, in the axil of the leaf, subtended by closely appressed sheaths. Flowers opening in succession, only one present at a time. Lateral sepals spreading. 4.5 mm. long, 2 mm. wide, oblong-lanceolate, acute or subacute, 3-nerved. Dorsal sepal similar. Petals 4 mm. long, 1.5 mm. wide, oblong-lanceolate, subacute, 3-nerved. Labellum 3 mm. long, 3-lobed; lateral lobes 1.5 mm. long, .5 mm. wide, erect and porrect, falcate, subacute or obtuse; middle lobe 2 mm. long, 2 mm. wide, quadrate-oblong, tridentate at the apex with the lateral teeth rounded and the middle one acute; disc bicarinate at base. Column produced at base forming a distinct foot, about 1.5 mm. long,

Republic of Honduras, Department of Cortez, El Jaral, Lake Yojoa. Epiphyte in dense tropical forest, 2,000 feet altitude. Sepals, petals and lip lemon yellow: column white. October 29, 1932. *J. B. Edwards 304.* (Type in Herb. Ames No. 39043).

Illustration: Plant drawn natural size from dried specimens. Flower much enlarged (at right). Labellum much enlarged (at left).

# THE HONDURAN SPECIES OF LEPANTHES

BY

OAKES AMES

Three species of Lepanthes are now known to be natives of the Republic of Honduras; *L. hondurensis* Ames, published in 1931, *L. turialvae* Reichb.f., recently collected by J. B. Edwards; and *L. Edwardsii*, which is described below

**Lepanthes hondurensis** Ames in Proc. Biol. Soc. Wash. 44 (1931) 43. This species is related to *L. appendiculata* Ames, a Guatemalan plant, but is larger with differences in the structure of the labellum. The flowers

are extremely attractive, suggesting tiny butterflies with orange wings bordered with mauve, spread out on the yellow background formed by the sepals. The accompanying plate was prepared from the type.

Republic of Honduras, Department of Atlantida, Lancetilla Valley, near Tela. March 11, 1923. *Ames II. 171, II. 176*: Department of Comayagua, Pito Solo, Lake Yojoa. Epiphyte in dense forest, at 2,000 ft. altitude. August 1932. *J. B. Edwards 90, 93* and *230.*

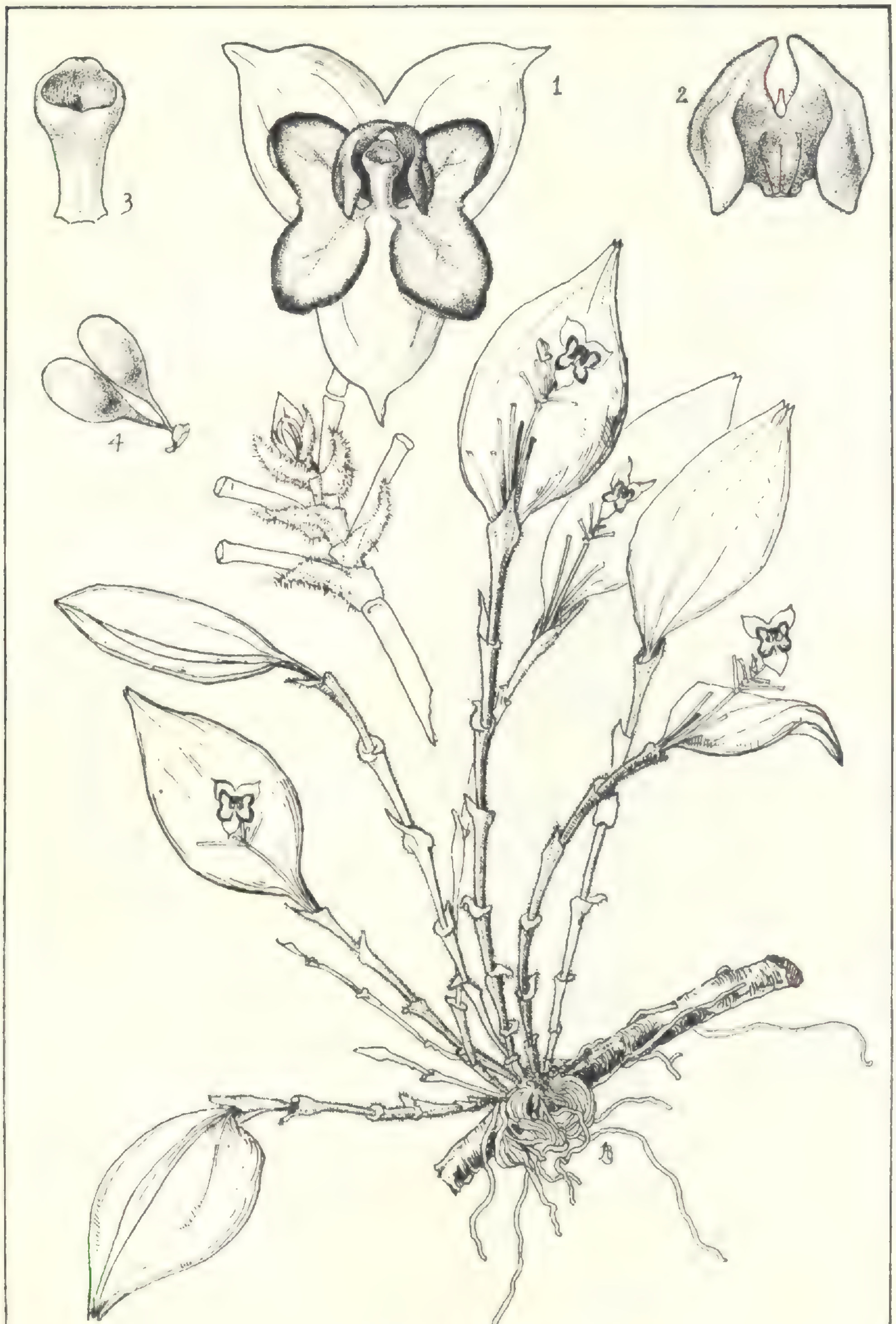
Illustration: Plant about four fifths natural size. 1, inflorescence much enlarged. 2, labellum. 3, column (posterior view). 4, pollinia.

**Lepanthes turialvae** Reichb.f. Beitr. Orch. Centr. Amer. (1866) 57.

Republic of Honduras, Department of Comayagua, Siguatepeque. Epiphyte in open mountain forest, at 3,700 feet altitude. Sepals pink, petals and labellum red. September 26, 1932. *J. B. Edwards 258*: El Achote. Epiphyte in dense forest, at 3,900 feet altitude. Sepals light pink, petals and lip rose. September 27, 1932. *J. B. Edwards 260.*

**Lepanthes Edwardsii** *Ames sp. nov.* Caules secundarii vaginis laxis, hispidis, tubularibus ommino inclusi, ascendentes, monophylli, caespitosi. Folia elliptica apice inconspicue tridenticulata, marginata, in petiolum contracta. Inflorescentiae folium excedentes, rachis fractiflexa. Sepala lateralia glabra, usque ad medium cohaerentia, laminam ovatam bifidam formantia. Sepalum dorsale lanceolatum, bene caudatum. Petala carnosa, lanceolata vel sub-semihastata, glabra, basi rotundata, apice subacuta. Labellum trilobatum; lobi laterales triquetri, anguste crescentiformes, acuti; lobus medius valde abbreviatus, oblongus, acutus. Columna valde arcuata.

Roots coarsely fibrous, whitish, smooth. Stems caespitose, monophyllous, 5-15 mm. long, slender, concealed by elongated tubular sheaths, erect or obliquely ascending, rigid. Sheaths two to five, 2-6 mm. long, the basal one shortest, finely hispidulous on the prominent longitudinal nerves, dilated at the mouth, with the margins




LEPANTHES *Hondurensis Ames*

thickened and hispidulous, the uppermost one enclosing the petiole of the leaf and conspicuously dilated upward above the middle. Leaf elliptical, marginate, 5-15 mm. long, 4-7 mm. wide, contracted at base into a short petiole, apex tridenticulate. Peduncles 1-4, equalling or exceeding the leaves, arising from the axils of the leaves, 7-12 mm. long to the base of the first flower, slender, smooth, usually with a single bract near the middle, bearing six to seven flowers in succession, only one of which is expanded at a time. Floral bracts infundibuliform, hyaline, hispidulous, equalling the short rigid pedicels. Flowers conspicuous, the tips of the lateral sepals directed upwards, 13-14 mm. long from the tip of the dorsal sepal to the tips of the lateral sepals, whitish or yellowish with purple petals. Lateral sepals smooth, united to about the middle, forming a broadly ovate bifid 4-nerved lamina 6.5 mm. long, 4 mm. wide, free portion of each sepal triangular acute. Dorsal sepal smooth, 6.5 mm. long, 2 mm. wide, lanceolate, caudate. Petals fleshy, smooth, lanceolate or semi-hastate, obtuse or subacute, 2-2.5 mm. long, scarcely 1 mm. wide at the base, parallel, the inner margins approximate above, closely appressed to the dorsal sepal. Labellum 3-lobed, with the lateral lobes fleshy, triquetrous, 3 mm. long, very narrowly crescentiform, closely appressed to the column at base, parallel or with the tips strongly incurved, at the tip closely appressed to the lateral sepals; mid-lobe minute, oblong, acute, about five times shorter than the lateral lobes, concealed by the column, ascending or abruptly inflexed. Column 1 mm. long, strongly curved downward over the middle lobe of the lip. Anther deeply retuse at the apex.

This is a charming little orchid with flowers longer than its leaves, with membranaceous light yellow or whitish sepals and deep purple fleshy petals which hang

# LEPANTHES

*Edwardsii Ames*




1932

downward, closely applied to the dorsal sepal and at base extend very little beyond the column, their basal ends close to the base of the labellum. It is closely allied to *Lepanthes Johnsonii* Ames from which species it differs in the relative proportions between the petals and the sepals. In *L. Johnsonii* the sepals are purple and twice longer than in *L. Edwardsii* while in both species the petals and labellum are nearly equal in length. From *L. Tuerckheimii* Schltr. and *L. guatemalensis* Schltr. it differs conspicuously in the structure of the petals and in being vegetatively a much smaller species.

Edwards no. 261 differs from all the other specimens referred to *L. Edwardsii* in the color of the sepals which, except for a yellowish tinge at base, are purplish rather than yellow. It seems highly probable that the flowers of this species vary in color as they pass from youth to maturity.

REPUBLIC OF HONDURAS, Department of Comayagua, Pito Solo, Lake Yojoa. Epiphyte in dense forest, at 2,000 feet altitude. August 26, 1932. *J. B. Edwards 96.* (TYPE in Herb. Ames No. 39045) : Minas de Oro at Malcotal. Epiphyte in mountain forest, at 4,200 feet altitude. July 5, 1932. *J. B. Edwards 196*: San Luis at Coyocutena. In dense mountain forest, at 4,000 feet altitude. May 25, 1932. *J. B. Edwards 171*: Siguatepeque at El Achote. Epiphyte in dense forest, at 3,900 feet altitude. Flowers wine color, slightly lighter at base of petals. September 27, 1932. *J. B. Edwards 261.*

ILLUSTRATION: Plant natural size. 1, flower much enlarged. 2, labellum and column as seen from above. 3, labellum freed from the column to reveal the sharply upturned apex of the mid-lobe. 4, petal. 5, anther from the ventral side. 6, side view of the column and mid-lobe of lip, the lateral lobes forcibly spread apart.

# BOTANICAL MUSEUM LEAFLETS
## HARVARD UNIVERSITY

CAMBRIDGE, MASSACHUSETTS, FEBRUARY 24, 1933 No. 5


## A NEW ONCIDIUM FROM HONDURAS


BY

OAKES AMES


FROM J. B. Edwards there has been received a species of Oncidium which appears to be new. It is related to *O. glossomystax* Reichb.f. and *O. Titania* Schltr., but differs from them in having the disc of the labellum, in front of the callus, quite free from appendages. The closest ally is undoubtedly *O. gnomus* Kränzl., but that species also differs in having a more complicated crest on the labellum. It is probable that the crest varies considerably and is not a reliable guide to specific distinction, but until more material has been examined it would be questionable procedure to merge the Honduran plant with *O. gnomus*. It is a charming species and with *O. gnomus* and *O. Titania* enjoys the distinction of being one of the smallest species of the genus yet known.

**Oncidium hondurense** *Ames, sp. nov.* Planta minuta, ebulbosa. Folia plus minusve octo, ensiformia, equitantia, obtusa vel subacuta. Pedunculus foliis subduplo longior, uni-triflorus; bracteae minutissimae, acutae. Sepala lateralia libera, oblongo-lanceolata, apice breviter conduplicata, acuta, extus per medium carinata. Sepalum dorsale obovatum, apice conduplicatum. Petala oblongo-lanceolata, apice breviter conduplicata, acuta. Labellum unguiculatum; lobi laterales dolabriformes,

margine exteriore plus minusve crenulati; lobus medius multo major, quadrilobulus, lobulis lateralibus semi-orbicularibus, lobulis anticis minoribus, obtusis; totum labellum igitur in lobulos sex divisum. Crista usque ad apicem dilatata, apice quadridentata. Columma brevis. Alae gynostemii dolabriformes, vix crenulatae. Flores pallide lutei.

In habit similar to *Oncidium pusillum* Reichb.f., but smaller in its vegetative and floral parts, mature plants hardly exceeding 2.5 cm. in height. Roots filamentous, whitish, smooth. Leaves ensiform, about eight, equitant, compressed, forming a fan-shaped plant, the lowermost ones often horizontal, the others obliquely ascending with the uppermost ones perpendicular, 7-18 mm. long, 2-4 mm. wide, obtuse or subacute, longitudinally nervose when dry, fleshy and smooth when fresh. Peduncle slender, one - to three flowered, 2-3 cm. long. Floral bracts about 2 mm. long, conduplicate, triangular, acute, much shorter than the pedicels, smooth. Pedicel together with the ovary about 5 mm. long, slender, smooth. Flowers yellow, 9-11 mm. long between the tip of the dorsal sepal and the tip of the six-lobed labellum. Lateral sepals free to the base, 2 mm. long, about .5 mm. wide, oblong-lanceolate, acute, somewhat conduplicate at the tip, carinate along the middle nerve on the outer surface. Dorsal sepal 3 mm. long, up to 2 mm. wide, obovate, broadest above the middle, tapering gradually toward the base, abruptly narrowed at the tip and shortly conduplicate, acute, lightly carinate externally along the middle nerve. Petals 2.5-3 mm. long, about 1.6-2 mm. wide, oblong-lanceolate, shortly conduplicate at the acute tip, 1-nerved. Labellum about 7 mm. long, 3-lobed, the terminal lobe conspicuously bilobulate at the tip with a larger basal lobule on each side; lateral lobes 2 mm. long, 2 mm. wide, do-

ONCIDIUM
hondurense
Ames
1932

labriform with the margin entire or irregularly and coarsely crenate, 5-6 mm. wide from the tip of one to the tip of the other: isthmus .75 mm. long, about 2 mm. wide: terminal lobe 6 mm. wide at the base, about 4 mm. long, the terminal lobules 2 mm. long, 1 mm. wide, oblong, obtuse, entire or obscurely and irregularly crenate, separated by a narrow sinus, inner margins partly contiguous or overlapping. Crest about 3 mm. long, shallowly sulcate toward the base, dilated toward the anterior end where it becomes quadridentate (sometimes with supplimentary teeth or lobules), the anterior pair of teeth projected forward on a quadrate base with the posterior teeth lateral one on each side and widely divergent. Column fleshy, 1.5 mm. long, with a pair of dolibriform wings at the summit; wings 1 mm. long, with the margin entire or obscurely and sparsely crenulate.

Republic of Honduras, Department of Comayagua, Pito Solo, Lake Yojoa. Epiphyte in dense forest, 2,000 feet altitude. Flowers yellow. August 28, 1932. *J. B. Edwards 101* (Type in Herb. Ames No. 39050.)

Illustration: Above, plant drawn natural size. Below, plant much enlarged.

# EPIDENDRUM EDWARDSII

Since the publication of *Epidendrum Edwardsii* Ames in Botanical Museum Leaflets, No. 2 (1932) 1, a drawing has been made from the type material to illustrate the general habit of the plant and the details of floral structure. This drawing is reproduced on the following page.

Illustration: Plant drawn natural size. A single flower much enlarged.

EPIDENDRUM *Edwardsii Ames*

# BOTANICAL MUSEUM LEAFLETS
## HARVARD UNIVERSITY

CAMBRIDGE, MASSACHUSETTS, MARCH 20, 1933 No. 6


## AN ADDITION TO THE GENUS HEXADESMIA


BY

OAKES AMES


THE NEW SPECIES of Hexadesmia described below might readily be mistaken for a tall, slender form of *H. crurigera* Lindl., but in the texture and color of the flowers, and in the outline of the very different labellum it is quite distinct.

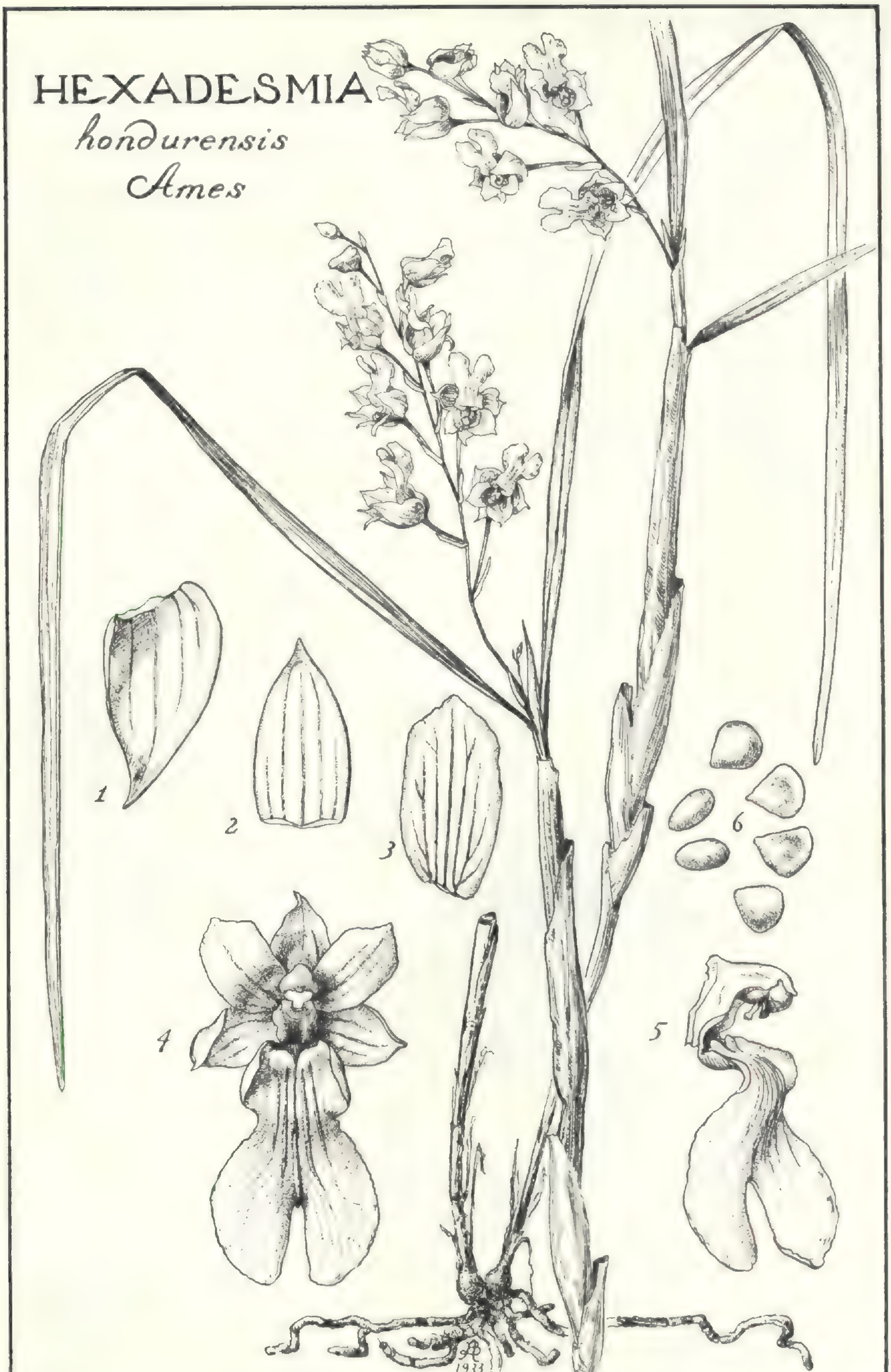
**Hexadesmia hondurensis** *Ames sp. nov.* In habitu *H. crurigerae* Lindl. similitudinem gerit, sed labelli lobis et magnitudine differt. Caules caespitosi, valde elongati, diphylli. Folia anguste linearia. Pedunculus quam folia brevior. Racemus plus minusve septemflorus. Sepala lateralia mentum rotundatum formantia, ovato-lanceolata, acuta, extus per medium leviter carinata. Sepalum dorsale oblongo-lanceolatum, concaviusculum. Petala oblonga, apice abrupte rotundata. Labellum subpanduratum, apice valde bilobatum, prope basim bicallosum. Columna in pedem producta.

Stems densely caespitose, erect, 12–15 cm. tall, minutely pseudobulbous at the base, very slender and many-sheathed for about 6 cm. then abruptly thickened to form an elongated secondary pseudobulb which is 8–9 cm. long, about 5 mm. in diameter when dry, subtended by several imbricating truncate sheaths and diphyllous at the apex.

Leaves linear, grass-like, 15–23 cm. long, about 3 mm. wide, obtuse, apiculate, obliquely erect. Inflorescence racemose, arising in the axil of the leaves, 6–7 cm. long, erect, with several imbricating scarious sheaths at the base, about 7-flowered. Bracts of the raceme about 5 mm. long, narrowly lanceolate, conduplicate. Pedicels with the ovary 1–1.3 cm. long, slender, obliquely ascending, distichous. Flowers pale yellow with lavender striations on the labellum. Lateral sepals 5 mm. long, about 3 mm. wide, ovate-lanceolate, acute, strongly concave, connate at the base forming a conspicuous rounded mentum, lightly carinate along the middle nerve on the outer surface. Dorsal sepal 5 mm. long, oblong-lanceolate, acute, closely appressed to the petals, 3-nerved to the tip. Petals 5 mm. long, about 2 mm. wide, oblong, abruptly rounded at the tip, subacute. Labellum about 9 mm. long, 6 mm. wide across the bilobed tip, obliquely ascending then sharply deflexed, subpandurate from a rounded base; the apical lobes 3 mm. long, 3 mm. wide, rounded, slightly divaricate, obscurely erose on the margin. Disc with two obliquely placed basal calli from each of which a lightly raised keel extends nearly to the sinus formed by the terminal lobes, with a central keel between them and a short supplementary keel on each side. Column about half as long as the dorsal sepal, produced into a conspicuous foot. Pollinia six.

Republic of Honduras, Department of Comayagua, Minas de Oro. Epiphyte in open mountain forest, at 4,000 feet altitude. Sepals and petals pale yellow, labellum pale yellow with lavender stripes. December 26, 1932. *J. B. Edwards 334.* (Type in Herb. Ames No. 39065); Epiphyte in open mountain forest, at 4,000 feet altitude. Sepals and petals green with lavender ticking, labellum bronze. December 28, 1932. *J. B. Edwards 337.*

Illustration: Plant natural size. 1, lateral sepal enlarged. 2, dorsal sepal enlarged. 3, petal enlarged. 4, flower enlarged. 5, lip and column viewed from the side, enlarged. 6, pollinia enlarged.


HEXADESMIA
honduransis
Ames
1
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6
1933

# A NEW BLETIA FROM SPANISH HONDURAS

BY

OAKES AMES

AMONG recent collections made by J. B. Edwards in Spanish Honduras, a new species of Bletia has been recognized. It is without close allies and differs from all other Central American components of the genus in having the disc of the labellum closely beset with papilliform emergences below the base of the middle lobe. The following description was prepared with the aid of flowers preserved in alcohol.

**Bletia papillifera** *Ames sp. nov.* Cormus depresso-subglobosus vel pyriformis, vaginis pluribus scariosis vestitus. Folia lineari-lanceolata, acuta, nervosa. Scapus erectus, elongatus, gracilis, pauciflorus. Sepala lateralia oblonga, acuta. Sepalum dorsale simile. Petala anguste oblongo-elliptica, obtusa, nervosa. Labellum supra medium trilobatum; lobi laterales erecti, triangulares, obtusi; lobus medius obcordatus, leviter carinatus, carinis crassiusculis; discus papillifer. Columna vix in pedem producta, elongata, prope apicem anguste bialata, prope basim utrinque lobata.

Roots coarsely fibrous, whitish, smooth, sulcate longitudinally when dry, up to 7 cm. long, about 2 mm. in diameter. Corm globular or pyriform, 2–2.5 cm. long, covered with the fibrous remains of closely appressed sheaths. Leaves 12–20 cm. long, 5–17 mm. wide, one or two in number, much shorter than the flower-scape, linear-lanceolate, acute, tapering to a narrow sulcate base. Scape erect, about 40 cm. long, slender, about 2 mm. in diameter, with several closely appressed scarious sheaths. Flowers two to four, secund, whitish tinged with crim-

son, opening in succession, 2–4 cm. distant from one another, the lowermost one with maturing capsule while the terminal one is in the bud. Bracts of the inflorescence about 1 cm. long, lanceolate, tapering gradually to an acute tip. Pedicels about 1 cm. long, slender. Ovary about 1 cm. long. Lateral sepals 12–14 mm. long, 3.5 mm. wide, oblong, acute, lightly carinate beneath the tip or simply thickened, nervose. Dorsal sepal about 14 mm. long, similar to the laterals. Petals 14 mm. long, 3.5 mm. wide, narrowly oblong-elliptical, tapering rather gradually to a rounded tip, many-nerved. Labellum 14 mm. long, 3-lobed; lateral lobes triangular, obtuse, erect, arising just above the middle, 9 mm. long to the base of the column, the nerves nearest the sinus thickened or verrucose; middle lobe 5–6 mm. long, 7.5 mm. wide near the middle, 3.5 mm. wide at the base, obcordate or cuneate with a rounded retuse tip, with about eleven irregularly carinate or verrucose nerves, apical margin turned upward. Disc papilliferous along the nerves up to the base of the middle lobe, the papillae purplish. Column about 7 mm. long, dilated upward, with a rounded wing or lobe on each side at the base; anther 2.5 mm. long, conical, long-stipitate. Pollinia eight.

Republic of Honduras, Department of Comayagua, Kilometer 154, Tegucigalpa Highway. Terrestrial in marshy ground in open pine forest, 3,400 feet altitude. Sepals and petals cream with a scarlet tint; lip cream with many scarlet stripes. October 6, 1932. *J. B. Edwards 277*. (Type in Herb. Ames No. 39066).

Illustration: Plant natural size. 1, flower, front view, enlarged. 2, flower, side view, enlarged. 3, column enlarged.

BLETIA *papillifera* Ames

# BOTANICAL MUSEUM LEAFLETS
## HARVARD UNIVERSITY

CAMBRIDGE, MASSACHUSETTS, APRIL 24, 1933 — No. 7


# AN ADDITION TO THE GENUS EPIDENDRUM


BY

OAKES AMES


IN 1923, while collecting in Spanish Honduras, I found near Tela, a species of Epidendrum which appears to be undescribed. It was growing in a swampy forest that receives the flood waters of the Ulua River. The stems were pendulous from the trunk of a tree. Near Progresso, an inland town, I found another specimen of the same species growing in full sunlight on a rock beside a mountain stream. Owing to the pendulous habit of the stems, the flowers were inverted. This characteristic is clearly shown in the accompanying illustration. In August 1932, Mr. J. B. Edwards found this species near Lake Yojoa, in the Department of Comayagua. Apparently it is widely distributed in Honduras although it has not yet been reported from neighboring countries.

**Epidendrum hondurense** *Ames sp. nov.* Herba epiphytica, robusta. Caules foliosi, foliorum vaginis omnino obtecti. Folia disticha, oblongo-elliptica, acuminata. Inflorescentia terminalis, longe pedunculata, pedunculo vaginis pluribus ancipitibus ornato. Racemus multiflorus. Flores mediocres. Sepala lateralia oblanceolata, obliqua, concava. Sepalum dorsale simile. Petala angustissime spathulato-linearia. Labellum columnae valde adnatum, trilobatum, in basi cordatum; lobi laterales suborbiculares

vel dolabriformes; lobus medius bifidus; discus in basi bicallosus, per medium lineis tribus ornatus. Columna apice dilatata.

Plant epiphytic. Stems tufted, 61 97 cm. long, concealed by tubular closely appressed sheaths, the upper ones bearing leaves. Leaves jointed, seven or more, oblong-elliptic ,acuminate, acute, distichous, obliquely ascending, 15 21.5 cm. long, 1.8 3.5 cm. wide, gradually diminishing in size toward the summit of the stem, more or less coriaceous, becoming chartaceous when dry, the internodes 2 4 cm. long. Inflorescence an elongated simple raceme. Peduncle below the raceme 12.2 20.6 cm. long, mostly concealed by distichous sheathing acute bracts which are 3.5 cm. long and which gradually pass into the several widely separated bracts that arise alternately below the raceme and become brownish with age. Raceme about 10 cm. long, hardly 4 cm. in diameter, many-flowered. Floral bracts triangular-lanceolate, acute, about 5 mm. distant from one another, the lowermost ones sometimes 1.9 cm. long and somewhat surpassing the shortly pedicellate ovary, the upper ones becoming gradually smaller. Flowers about equal in size to the flowers of *E. paniculatum* Ruiz & Pavon. Segments of the perianth spreading. Lateral sepals obovate-oblanceolate, 1.2 cm. long, 3.5 4.4 mm. wide above the middle, acute, rather fleshy, greenish, somewhat verrucose on the outer surface. Dorsal sepal similar, oblanceolate, about 4 mm. wide above the middle, acute or subacute. Petals very narrowly spatulate, about 1 cm. long, broadly obtuse, 1 nerved. Labellum adnate to the column for about half its length, lamina or free portion sharply deflexed, convex, trilobed, cordate at the base, about 5.2 mm. long; lateral lobes flabellate-suborbicular or dolabriform with the irregular margin often lobulate in front; middle lobe

EPIDENDRUM
hondurense
Ames

subquadrate-cuneate in outline, retuse or divided nearly to the middle into triangular-oblong lobules. Disc with two fleshy semiglobose calli at the base and with three raised longitudinal fleshy ridges through the middle. Column 7.1 7.9 mm. long. Anther semiglobose, 4 celled. Pollinia four.

*Epidendrum hondurense* is allied to *E. paniculatum* Ruiz & Pavon (*E. floribundum* HBK.), but is distinct in the outline of the labellum. In the type the sepals and petals exhibited a distinct tendency to become blackish with age. The lateral lobes of the labellum are sometimes almost free from lobules and exhibit only a slight tendency toward a crenulate margin. This is true of Edwards no. 228.

Republic of Honduras, Department of Atlantida, near Tela. Epiphyte in swampy forest near the banks of the Ulua River. March 20, 1923. *Ames s.n.* (Type in Herb. Ames No. 33710) : Department of Yoro, near Progresso. On rock overhanging the Rio Pelo. Sepals yellowish; petals and lip cream color, the lip somewhat yellowish on the disc, the expanded part sharply deflexed from the column. March 8, 1923. *Ames s.n.* : Department of Comayagua, Pito Solo, Lake Yojoa Epiphyte in dense forest, at 2,000 feet altitude. Flower stalk 3 feet high. Sepals and petals light yellow, lip cream color. August 13, 1932. *J. B. Edwards 228.*

Illustration: Plant drawn three-fourths natural size, from the type. Flower enlarged.

# BOTANICAL MUSEUM LEAFLETS
## HARVARD UNIVERSITY

CAMBRIDGE, MASSACHUSETTS, JUNE 14, 1933 No. 8


## A NEW EPIDENDRUM FROM HONDURAS


BY

OAKES AMES


THE SPECIES of Epidendrum described below appears to be without close allies in the Central American flora. Superficially it suggests the rare *Epidendrum viejii* Reichb.f. and in its vegetative structure resembles *E. bisulcatum* Ames and *E. Brenesii* Schltr. From *E. Brenesii* it differs conspicuously in having a very dissimilar labellum.

**Epidendrum comayaguense** *Ames, sp. nov.* Caules perlongi, laxe ramosi. Folia valde coriacea, ovato-elliptica vel oblongo-lanceolata, acuta, plus minusve congesta. Racemi terminales, perbreves, plus minusve quinqueflori; pedunculus infra flores valde complanatus. Sepala lateralia concaviuscula, ovato-lanceolata, acuminata, acuta. Sepalum dorsale lanceolatum. Petala lineari-lanceolata. Labellum simplex, suborbiculare, margine breviter et irregulariter fimbriato. Columma brevissima, carnosissima, antice valde excavata.

Roots coarse, spreading, white, smooth. Stems elongated, 6 dm. or more long, straggling, with numerous short branches which are entirely covered by rigid tubular sheaths and bearing near the ends two to four leaves and a terminal dense abbreviated raceme of dull purple flowers. Branches from 3–15 cm. long, the older ones

devoid of leaves and sometimes terminated by the rigid remains of the rachis of a raceme. Leaves crowded, coriaceous, 4–10 cm. long, up to 2.5 cm. wide, elliptic-ovate or oblong-lanceolate, tapering gradually to a subacute apex, the terminal one exceeding the raceme. Leaf-sheaths somewhat complanate, 1.5–3 cm. long. Inflorescence 3–5 cm. long, from the axil of a terminal leaf. Peduncle below the flowers conspicuously complanate and slightly winged. Bracts of the inflorescence 1–1.5 cm. long, linear-lanceolate, acute. Pedicel and ovary 1.5 cm. long, rigid. Flowers three to nine, very fleshy. Lateral sepals about 2 cm. long, 9 mm. wide, strongly concave, porrect, asymmetrically ovate-lanceolate, acuminate, acute, with the median nerve lightly carinate. Dorsal sepal 1.8 cm. long, about 7 mm. wide, slightly concave, lanceolate, acuminate, acute. Petals 1.7 cm. long, 3 mm. wide, linear-lanceolate, acute, margin entire or minutely scabrid. Labellum up to 2.5 cm. long, 2 cm. or more wide, simple, suborbicular, deflexed, very finely and irregularly fimbriate on the margin. Disc smooth, ecallose. Column extraordinarily fleshy, deeply excavated in front with the lateral walls strongly thickened and rounded at the entrance to the excavation; stigma concealed; androclinium entire, with the margin forming an almost perfect circle; pollinia four, completely filling the androclinium.

Republic of Honduras, Department of Comayagua, Minas de Oro. Epiphyte in open mountain forest at 4,000 feet altitude. Sepals and petals dirty lavender with bright lavender veining, lip and column very dark, dull lavender. December 25, 1932. *J. B. Edwards 333.* (Type in Herb. Ames No. 39042.)

Illustration: Plant drawn natural size. 1, labellum much enlarged. 2, column much enlarged.

1
2
EPIDENDRUM
comayaguense Ames

**Pleurothallis Lewisae** *Ames* in Proc. Biol. Soc. Wash. 44 (1931) 41.

GUATEMALA, Department of Izabel, near Puerto Barrios, on a mango tree about forty miles from the coast, at 175 feet altitude. August 1930. *Margaret Ward Lewis 2.*

REPUBLIC OF HONDURAS, Department of Atlántida, Lancetilla, near Tela. Flowers dark brown-red. December 5, 1927–March 20, 1928. *Paul C. Standley 55202.*

ILLUSTRATION: 1, Honduran plant drawn natural size. 2, Guatemalen plant drawn one-third larger than natural size (type). 3, labellum of Guatemalen plant, much enlarged. 4, flower of Guatemalen plant, enlarged.

PLEUROTHALLIS

*Lewisae Ames*

3

4

1

2

# BOTANICAL MUSEUM LEAFLETS
## HARVARD UNIVERSITY

CAMBRIDGE, MASSACHUSETTS, AUGUST 12, 1933 — No. 9


# A NEW GENUS OF THE PLEUROTHALLIDINAE


BY

OAKES AMES


THE ORIGINAL COLLECTION of *Pleurothallis floripecten* Reichb.f., which I believe represents a new genus, was made by Hermann Wagener near Jaji in Venezuela and was described by H. G. Reichenbach in Bonplandia 2 (1854) 25. So far as I know, only two specimens were studied by Reichenbach when he described the species. One of these is preserved in the Reichenbachian herbarium in Vienna; the other was presented to John Lindley by Reichenbach and is preserved in the Lindley Herbarium at Kew. Later, what Reichenbach thought to be the same species was represented by a living specimen in the collection of W. Wilson Saunders at Reigate, England. Saunders obtained this specimen from M. Linden of Brussels, but whether or not it came originally from Venezuela is not known.

The relationship between *Pleurothallis floripecten* and its closest allies has heretofore never been thoroughly investigated. There are two substantial reasons why this should be so. First, *P. floripecten* has proved to be exceedingly rare; secondly, those species which resemble it closely have also proved to be rare. Two of these species which were originally assigned to Lepanthes by Barbosa Rodriguez, were transferred by Cogniaux in Martius'

Flora Brasiliensis to Pleurothallis on the evidence of sketches, there being no specimens available for critical study. That these Brazilian species were aberrant is evinced by the fact that Cogniaux proposed for their reception the new section Lepanthopsis. Later, in Urban's Symbolae Antillanae, Cogniaux recognized *Pleurothallis anthoctenium* Reichb.f., a West Indian species, as being referable to the alliance formed by the Brazilian species and he introduced the section Lepanthopsis in Symbolae Antillanae to receive *P. anthoctenium*.

To establish generic boundaries in the Pleurothallidinae vegetative characters have proved to be without weight. The perianth has also proved inadequate as various degrees of cohesion between the sepals, while relied on for generic distinction, have been found useless because of misleading exceptions. The only structure that is fundamentally serviceable is the gynostemium, an organ that is desperately difficult to reconstruct and interpret when it has been crushed by the pressure used in preserving specimens for the herbarium, although in living specimens it exhibits clearly marked characters which are serviceable in differentiating major groups or genera.

The gynostemium of *Pleurothallis floripecten* and *P. anthoctenium* is very unlike what obtains in *P. ruscifolia* (Sw.) R.Br., the type of the genus Pleurothallis. The receptive stigmas are widely separated (cf. plate of *Lepanthopsis floripecten*, fig. 4, the heavily stippled area) and at anthesis are not conspicuously confluent along the frontal margin of the clinandrium beneath the rostellum as in *P. ruscifolia*; at the base the gynostemium is apodal, and at the summit conspicuously dilated with the posterior margin of the clinandrium cucullate. In *P. ruscifolia* the gynostemium is more or less elongated, cylindrical with a pulvinate foot, and an obliquely truncate apex. The stigmatic lobes of *P. floripecten* are suborbi-

cular and spreading. The anther is transversely elongated and contains two large, waxy pollinia. The widely separated functional areas of the stigmas at the dilated summit of the footless gynostemium are sufficient evidence to indicate that *P. floripecten* is generically distinct from *P. ruscifolia.* (cf. plate of *P. ruscifolia*).

The mere mention of widely separated receptive stigmas, to one familiar with the genera of the Pleurothallidinae, should suggest the highly technical genus Stelis, and were it not for the very unusual perianth and the lepanthiform vegetative structures, I think that one would be inclined to refer *P. floripecten* to Stelis. But this would be a debatable procedure. To make this clear several flowers of characteristic species of Stelis are here figured. I do not believe that it would be conformable to sound practice to remove *P. floripecten* and its allies from Pleurothallis and transfer them to Stelis. They would constitute as aberrant a group in Stelis as they surely do in Pleurothallis. (cf. plate of Stelis species).

Barbosa Rodriguez in his studies of the Brazilian species concluded that they were referable to Lepanthes. Vegetatively they are lepanthiform and the widely spreading connate sepals resemble very closely the sepals of certain species of Lepanthes, but the petals, labellum and gynostemium are very different from what obtains in that genus.

In my opinion the species of the section Lepanthopsis represent a distinct genus.

**Lepanthopsis** *Ames, gen. nov.*

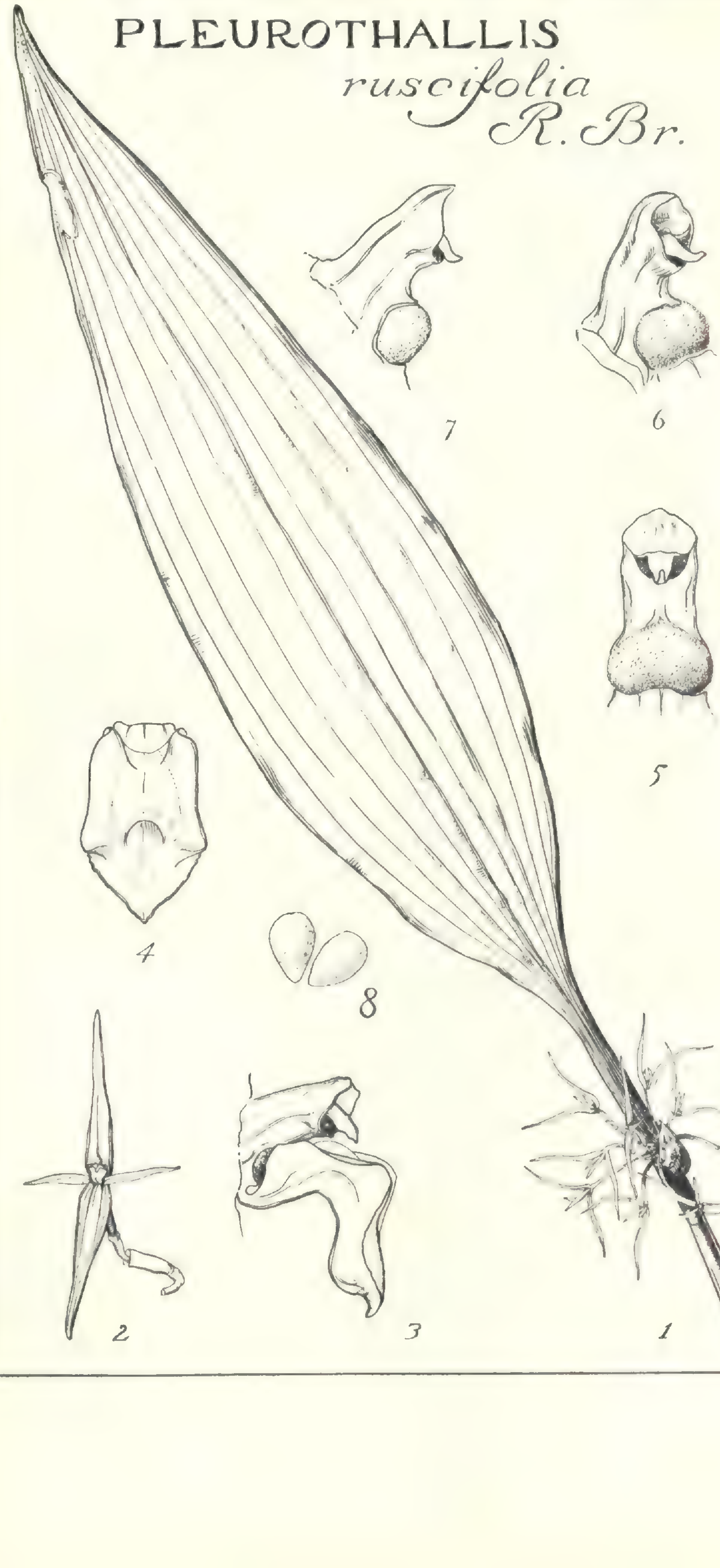
Sepala plus minusve subaequalis, patentia, breviter vel conspicue connata; lateralia altius connata. Petala multo breviora, membranacea, orbicularia vel elliptica. Labellum ad basin columnae sessile, simplex, valde membranaceum. Columna brevissima, apoda, antice utrinque lobo plus minusve carnoso instructa; lobis columnae stig-

## EXPLANATION OF ILLUSTRATION

PLEUROTHALLIS RUSCIFOLIA (*Jacq.*) *R. Br.* 1, leaf and inflorescence natural size, drawn from a Jamaican plant (*W. R. Maxon 9486*). 2, flower much enlarged. 3, labellum and column much enlarged (anther removed). 4, labellum much enlarged. 5, 6 & 7, column much enlarged, to show pulvinate foot, rostellum and stigmatic orifice under the rostellum (anther removed). 8, pollinia much enlarged.

# PLEUROTHALLIS

*ruscifolia*
*R. Br.*



7

6

5

4

8

2

3

1

matiferis. Anthera terminalis, opercularis, incumbens. Pollinia duo, cerea, subpyriformia. Caules secundarii caespitosi, monophylli, infra folium vaginis anguste infundibuliformibus instructis. Pedunculi terminales, ad basin folii solitarii vel fasciculati. Racemi elongati, floribus distichis saepe transversis, alternantibus.

**Lepanthopsis anthoctenium** (*Reichb.f.*) *Ames, comb. nov.*

*Pleurothallis anthoctenium* Reichenbach filius in Linnaea 41 (1876) 94; in Saunders Refug. Bot. 2 (Aug. 1878) sub. t. 118 [1] —Cogniaux in Urban Symb. Antill. 6 (1909) 433.

This species differs markedly from *L. floripecten* in the strigose hairs on the tubular sheaths that conceal the secondary stems and in the labellum being nearly as wide as the lateral sepals.

In Urban's Symbolae Antillanae, Cogniaux cites Wright's 1509 under *Pleurothallis melanantha* Reichb.f. Indeed some of Wright's collections are mixtures of his numbers 3342 (*P. melanantha*) and 1509, otherwise it would be difficult to explain Cogniaux's procedure in confusing two very dissimilar species. In Lindley's herbarium at Kew, Wright no. 1509 is mounted on the same sheet with *Pleurothallis floripecten*. In the Gray Herbarium Wright's nos. 1509 and 3342 are mounted on the same sheet and in this case it is apparent that both no. 1509 and no. 3342 are a mixture of *Lepanthopsis melanantha* and *L. anthoctenium*.

Haiti, *Poiteau* fide Reichb.f. loci cit.

Cuba, Prope villam Monte Verde dictum, Cuba Orientale. Jan.–July 1859. *C. Wright 1509*: Valley of the Rio Bayamita, south slope of the Sierra Maestra, ten meters up on tree trunk, at 900–1,050 meters altitude. April 5–7, 1907. *W. R. Maxon 3949*. (U. S. Nat. Herb. 522574).

[1] For discussion of date see page 32.

## EXPLANATION OF ILLUSTRATION

STELIS ENDRESII *Reichb.f.* 1, flower from the type specimen (×8). 2, labellum side view. 3, labellum as seen from above. 4, petal. 5, gynostemium (anther removed) showing lateral stigmas and the triangular rostellum.

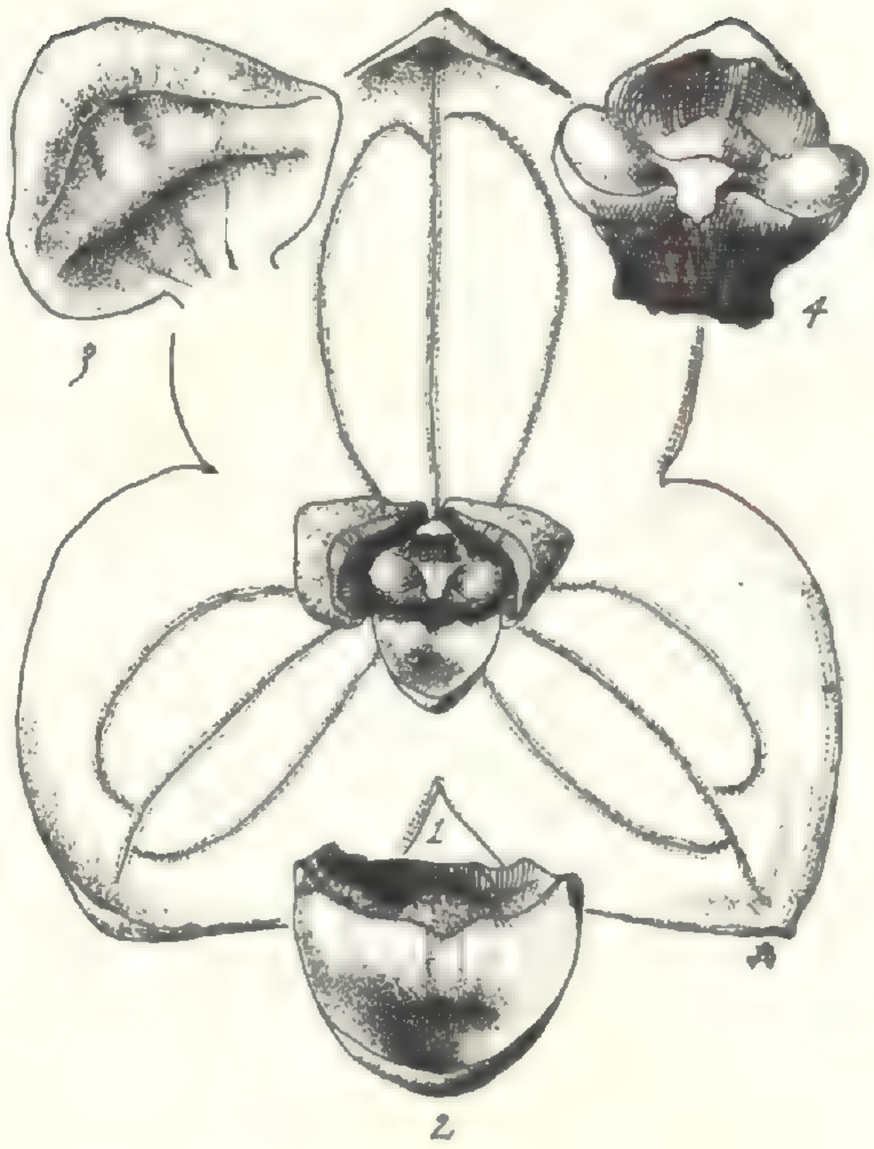
STELIS POWELLII *Schltr.* 1, flower from the type specimen (× about 9). 2, labellum as seen from above. 3, labellum oblique side view. 4, gynostemium (anther removed) showing lateral stigmas and linguiform rostellum. 5, petal.

STELIS VESTITA *Ames* 1, flower from the type specimen (× about 10). 2, labellum as seen from above. 3, gynostemium (anther removed) showing lateral stigmas and linguiform rostellum.

STELIS NUBIA *Ames* 1, flower from the type specimen (× about 7). 2, labellum as seen from above. 3, petal. 4, gynostemium (anther removed) showing lateral pulvinate stigmas and linguiform rostellum.

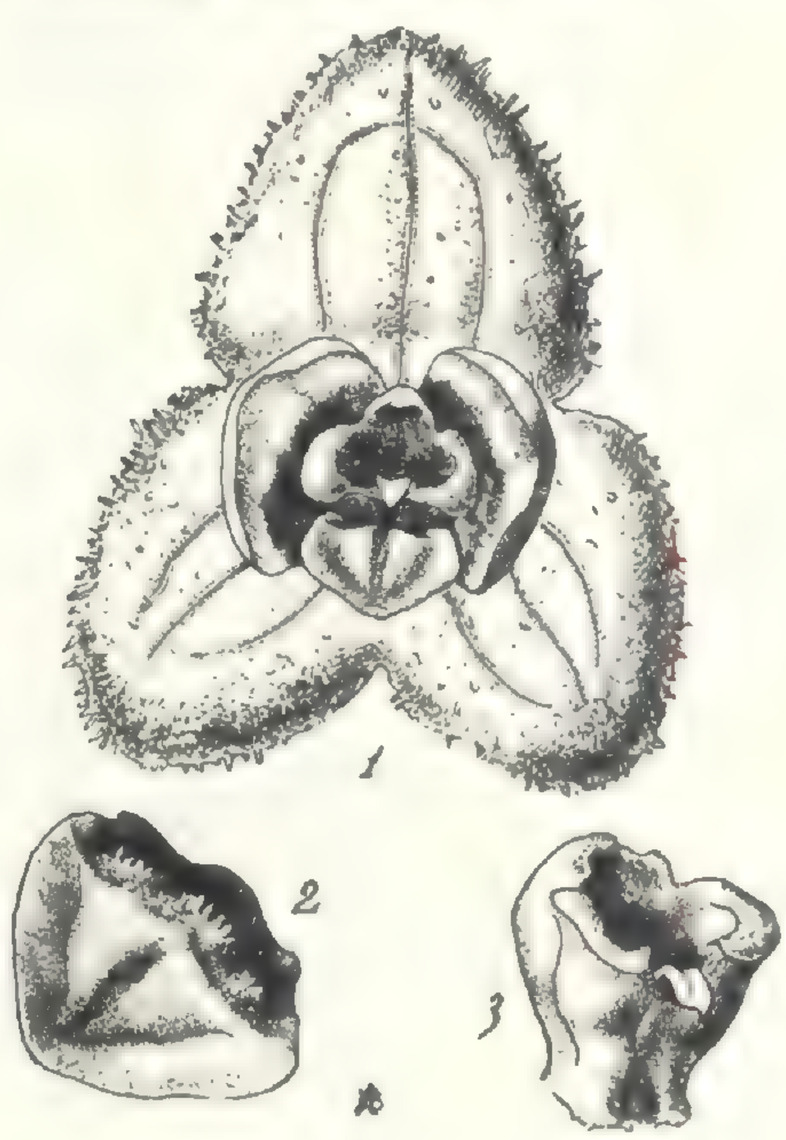
STELIS *Endresii Reichb.f.*

STELIS *nubis Ames*



STELIS *Powellii Schltr.*

STELIS *vestita Ames*



**Lepanthopsis densiflora** (*Rodr.*) *Ames, comb. nov.*

*Lepanthes densiflora* Rodriguez in Vellosia 1, ed. 2 (1891) 119.

*Pleurothallis congestiflora* Cogniaux in Martius Fl. Bras. 3, pt. 4 (1896) 591, t. 113, fig. 4.

*Lepanthopsis densiflora* differs from the other species of the genus in having the labellum nearly equal in length with the lateral sepals. The lateral sepals are about 1.5 mm. long, the labellum is 1.25 mm. long.

Brazil, As avores dos lugares sombrios e humidos da matta que circunda o cume da serra de S. José d'El-Rei, provincia de Minas Geraes. Floresce em Junho e Agosto. *Rodriguez.*

Illustration: Reproduced from Martius Fl. Bras. 3, pt. 4 (1896) t. 113, fig. 4 (as *Pleurothallis congestiflora* Cogn.). Plant, natural size. 3, lateral sepal. 4, petal. 5, labellum. 7 a, labellum and gynostemium as seen from the front. 7 l, labellum and gynostemium side view.

**Lepanthopsis floripecten** (*Reichb.f.*) *Ames, comb. nov.*

*Pleurothallis floripecten* Reichenbach filius in Bonpl. 2 (1854) 25; in Walpers Ann. Bot. Syst. 6 (1861) 175; in Saunders Refug. Bot. 2 (Aug. 1878) sub. t. 118.

*Lepanthes secunda* Rodriguez Gen. & Spec. Orch. Nov. 2 (1882) 70.

*Pleurothallis unilateralis* Cogniaux in Martius Fl. Bras. 3, pt. 4 (1896) 592, t. 122, fig. 2—Ames & Schweinfurth in Gleason in Bull. Torr. Bot. Club 58 (1931) 346.

The sketch of the Brazilian plant in Martius' Flora Brasiliensis represents the leaves as being broader than in the specimens from Venezuela and Honduras, but the structure of the flowers presents nothing tangible on which to establish distinctions. The specimens collected on Mt. Duida have slightly larger flowers than the Brazilian and Honduran specimens, but there seems to be nothing more significant on which to rely in attempting

separation.

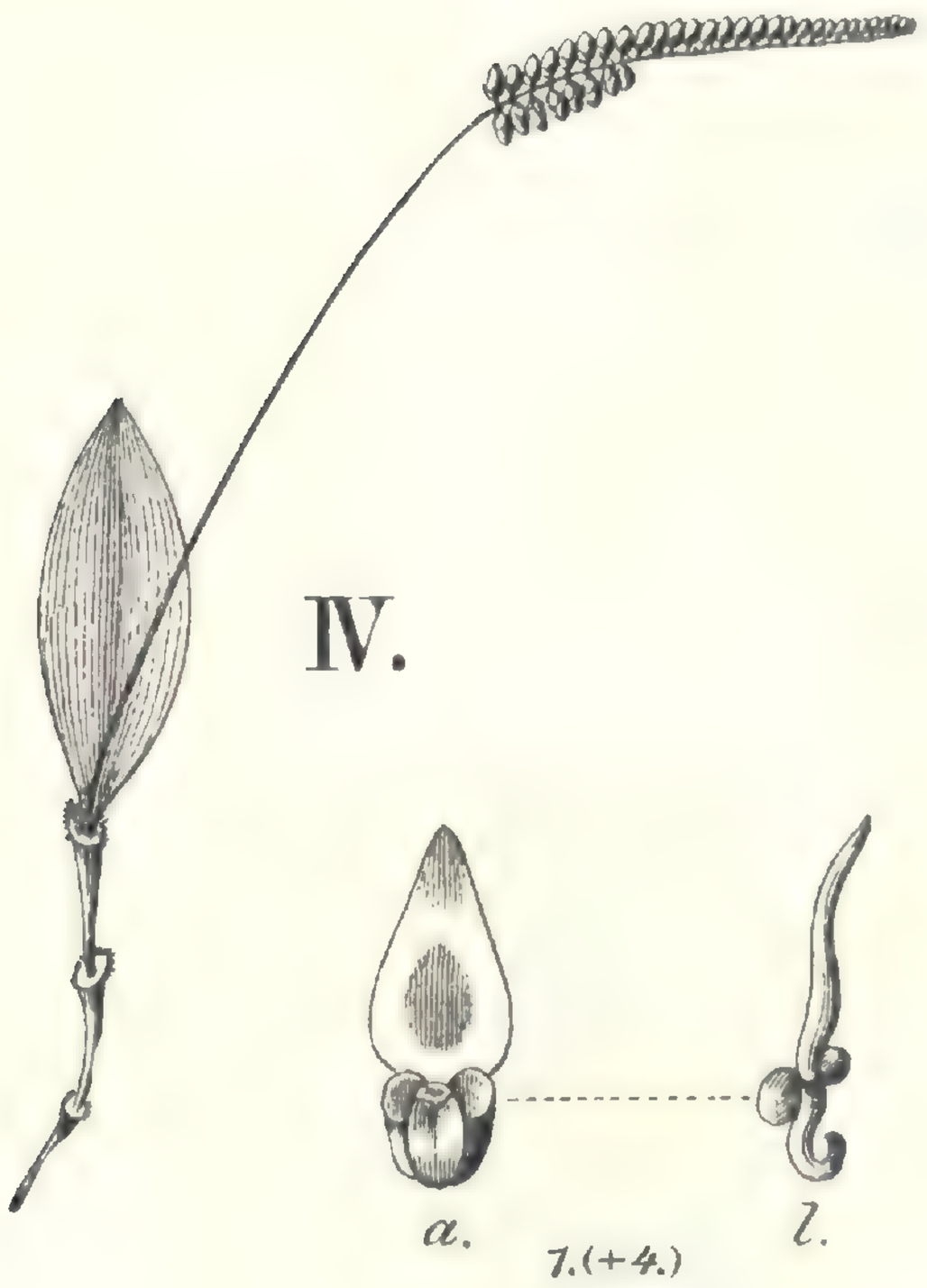
In the flowers I have examined the labellum is by no means so cordate as in Reichenbach's analytical sketches, but it is probable that in the plate prepared for Saunders Refugium Botanicum the tendency toward a cordiform base was overemphasized. Indeed, in the original sketch of the labellum of the Wagener plant, Reichenbach's outline of the basal portion indicates uncertainty, because he modified his drawing with supplementary lines.

The plate in Saunders Refugium Botanicum shows yellow sepals strongly suffused with mauve along the nerves, petals which are yellowish on the lower half and mauve on the upper half and the labellum yellowish-green with a mauve border. In the dried specimens I have examined, the flowers appear to have been yellowish throughout and in his description of Wagener's plant Reichenbach described the flowers as being yellowish when dry. However, Saunders' plant is structurally so similar to the ones from Mt. Duida and from Honduras that it would be unwise to regard them as distinct species until more material has been seen. Reichenbach's drawing and his description of the gynostemium are misleading and should be disregarded.

The following description and notes are based on the specimens collected in Honduras by Edwards.

Plants 3–12.5 cm. tall. Roots glabrous, whitish, fibrous. Secondary stems ascending, densely caespitose, variable in length, slender, 5–70 mm. long, completely concealed by two to six closely appressed elongated tubular sheaths, monophyllous. Sheaths up to 1.5 cm. long, gradually dilated upward, terminating in an infundibuliform marginate ostium; margin of the ostium muriculate or very finely hispidulous. Leaf coriaceous, oblong-elliptic, marginate, very shortly petiolate, 1.5–3.7 cm. long, up to 9 mm. wide, bidentate at the apex with the mid-

# LEPANTHOPSIS
## *densiflora* (*Rodr.*) *Ames*



nerve projecting. Peduncles one to four in the axil of the leaf, up to 6 cm. long, filiform, rigid, with several remote abbreviated tubular bracts. Raceme about 1.5 cm. long, bearing as many as twenty distichously placed yellow flowers. Bracts of the raceme infundibuliform, scarious, equaling the pedicels of the flowers. Flowers .75 mm. apart, transversely attached, contiguous. Lateral sepals about 3 mm. long, connate to within 1 mm. of the tip, forming an oblong bifid lamina 1.5 mm. wide, conspicuously carinate on the exterior surface, acute or subacute, united at base with the dorsal sepal, 1–nerved. Dorsal sepal 2 mm. long, 1 mm. wide, ovate, obtuse or subacute. Petals spreading, about .5 mm. long, oblong-elliptic, rounded at the apex, 1–nerved. Labellum 1 mm. long, scarcely 1 mm. wide, elliptical, conspicuously 3–nerved. Column very short, dilated upward; stigmas orbicular, widely separated. Anther papillose. Pollinia two.

In the enlarged drawing of the raceme, two flowers near the summit are shown with the dorsal sepal inflexed. This condition seems to accompany the development that follows pollination. In flowers that exhibited this peculiarity I found pollen masses adhering to the stigma. The petals had become inflexed in such a way that they concealed the column; the dorsal sepal was closely applied to them, so as to form a protective covering over the pollinated stigmas.

In Edwards' specimens there is a wide range in the size of the plants. The production of the first raceme occurs when vegetative development is characterized by very short secondary stems. As the second, third and fourth peduncles appear, vegetative development has progressed rapidly. This phenomenon is clarified by two drawings, one showing a young plant that is flowering for the first time, the other showing an elongated stem which bears four peduncles.

Republic of Honduras, Department of Comayagua, Minas de Oro. Epiphyte in mountain forest, 4,200 feet altitude. Flowers sulphur color. July 5, 1932. *J. B. Edwards 194;* Siguatepeque. Epiphyte in open pine forest, 4,000 feet altitude. Flowers pale yellow. September 22, 1932. *J. B. Edwards 252.*

Colombia, Reported by Schlechter as probably having been found in North Santanda.

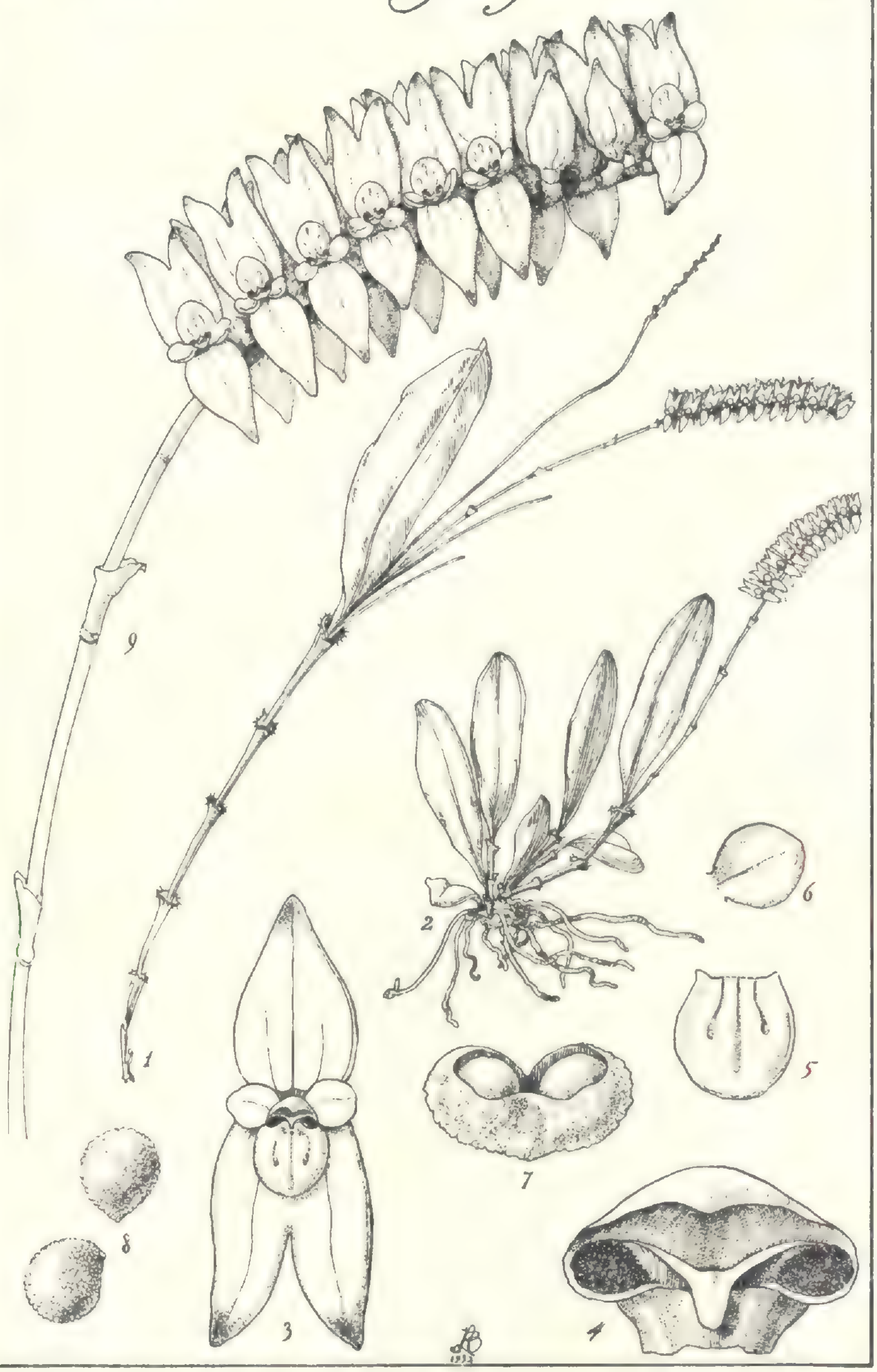
Venezuela, near Jaji. *Hermann Wagener;* Summit of Mount Duida, Epiphyte in woods, 4,400 feet altitude. *G. H. H. Tate 825.*

Brazil, Croissant sur les arbres des forêts qui couvrent les montagnes près Rodeio et à la Province du Ceará. Fleurit en Mars. *Fr. Allemao 1490* fide Rodriguez loc. cit.

Illustration: 1, secondary stem (natural size) with four peduncles showing that the stem elongates as the successive peduncles are produced. 2, general habit (natural size) showing that the stems are comparatively short when the first peduncle is produced. 3, flower much enlarged. 4, gynostemium much enlarged. The heavily stippled areas represent the lateral stigmas. 5, labellum much enlarged. 6, petal much enlarged. 7, anther much enlarged showing the under side. 8, pollinia much enlarged. 9, peduncle and raceme much enlarged.

Two other species that appear to belong in Lepanthopsis, namely *Pleurothallis melanantha* Reichb.f. and *P. microlepanthes* Griseb., are represented in herbaria by material that is difficult to analyze. *P. melanantha* was described from fruiting specimens with the perianth organs persisting. The gynostemium had suffered changes which obscure the structure that characterized the flowers before pollination was effected. *P. microlepanthes* in its post-pollination phases closely resembles *P. melanantha* while at anthesis the gynostemium suggests the structure that characterizes *Lepanthopsis floripecten*. It seems likely that both *P. melanantha* and *P. microlepanthes* are in the same alliance formed by *L. floripecten* and *L. anthoctenium*, yet they appear to differ conspicuously from these species in the aspect of the inflorescence. Vegetatively and in the plan of the perianth they suggest *L. anthoctenium* very closely, with the dorsal sepal more ex-

LEPANTHOPSIS *floripecten* *Ames*



tensively connate with the laterals.

In the illustration of *Lepanthopsis microlepanthes*, fig. 5 clearly shows the post-pollination aspect of the gynostemium. The semi-globular protuberances, one with a pollinium attached to its summit, represent the extraordinary development that takes place after pollination is effected. This development of the stigmas is also found in *L. melanantha* and in *Pleurothallis ruscifolia*, but if my conclusions are justified, the end-result simply masks, in *P. ruscifolia*, the structural peculiarities antecedent to pollination.

In adding *P. melanantha* and *P. microlepanthes* to Lepanthopsis it should be remarked that they differ conspicuously from *L. floripecten* in the nature of the inflorescence. The flowers are not transversely inserted, but are distichous and in two ranks.

**Lepanthopsis melanantha** (*Reichb.f.*) *Ames, comb. nov.*

*Pleurothallis floripicta* Lindley in Mem. Amer. Acad. 8 (1861) 219, *nomen tantum.*
*Pleurothallis melanantha* Reichenbach filius in Flora 48 (1865) 275—Cogniaux in Urban Symb. Antill. 6 (1909) 430; 8 (1920) 126.

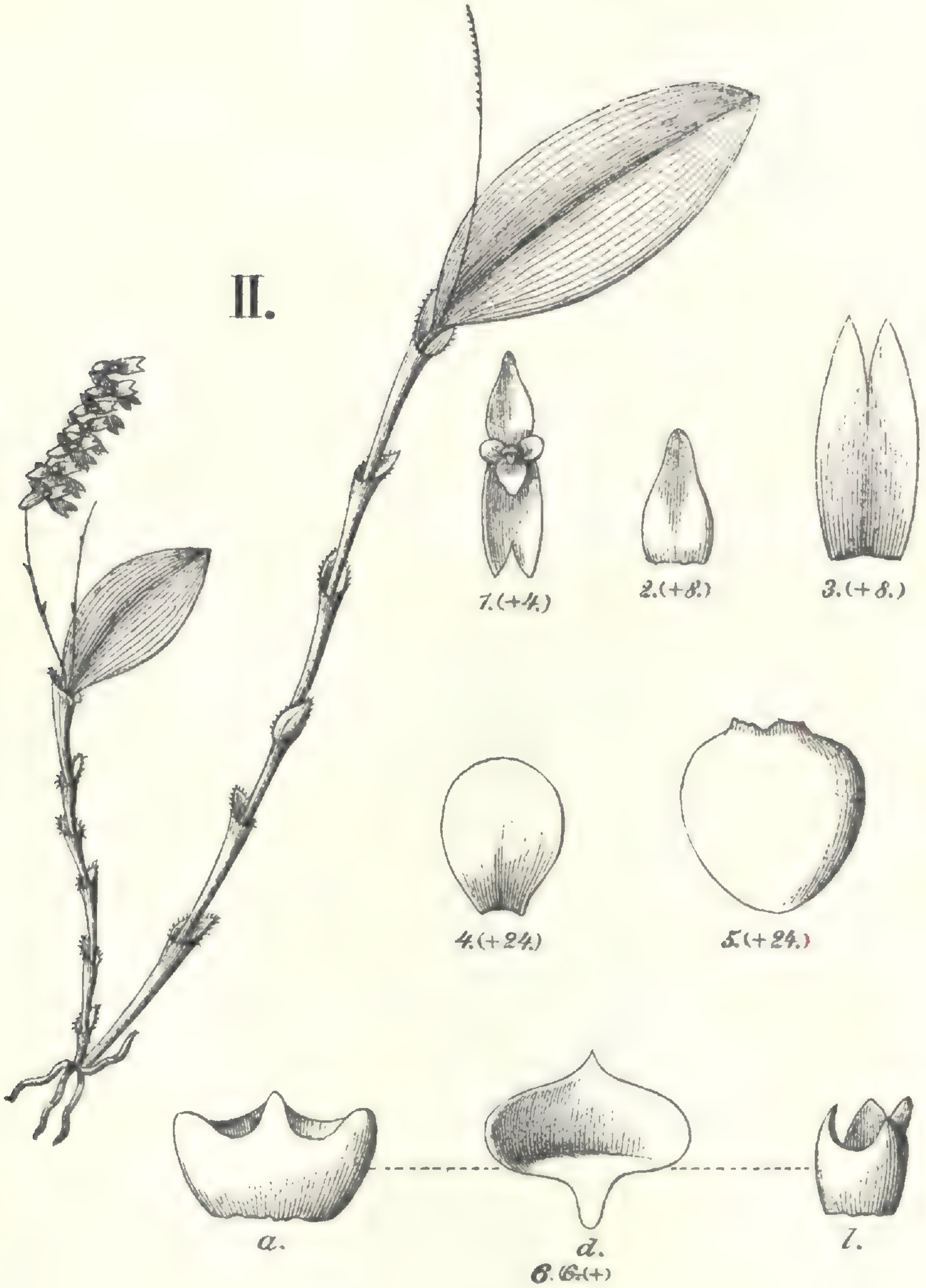
It was noted above under *Lepanthopsis anthoctenium*, that in Urban's Symbolae Antillanae, Alfred Cogniaux had referred Wright's Cuban plants distributed under numbers 1509 and 3342 to *Pleurothallis melanantha.* The only satisfactory explanation of this procedure seems to be that the plants representing these numbers were a mixture or at least that no. 1509 is represented by both species. In the Gray Herbarium where the plants numbered 1509 and 3342 are mounted on the same herbarium sheet, *Lepanthopsis anthoctenium* and *L. melanantha* are represented under both numbers. Although these species

## EXPLANATION OF ILLUSTRATION

LEPANTHOPSIS FLORIPECTEN (*Reichb.f.*) *Ames* Reproduced from Martius Fl. Bras. 3, pt. 4 (1896) t. 122, fig. 2 (as *Pleurothallis unilateralis* Cogn.). Plant, natural size. 1, flower. 2, dorsal sepal. 3, lateral sepal. 4, petal. 5, labellum. 6 a, gynostemium as seen from the front. 6 d, gynostemium as seen from above. 6 l, gynostemium side view.

# LEPANTHOPSIS
## *floripecten (Reichb.f.) Ames*

II.



are markedly distinct, they are very similar in the vegetative structures and difficult to distinguish apart when sterile, unless, as I think is true, the margin of the leaf of *L. anthoctenium* always has the appearance of being serrate, while the leaf of *L. melanantha* has a smooth or unserrated margin. In the specimens I have examined this distinction has been constant.

Reichenbach's description of *Pleurothallis melanantha* is, I think, misleading because in it he characterizes the petals as being ligulate. In his herbarium the sketch that accompanies the Wright plant shows the petals much longer than wide and conspicuously 1-nerved. In the specimens of Wright 3342 (the type number of *Pleurothallis melanantha*), that I have examined, I have found the petals to be nearly orbicular and without a conspicuous median nerve. Reichenbach described the labellum as being cordiform, acute. In the flowers of the type number that I have examined the labellum is cordiform, obtuse. Perhaps there is much variation in the perianth organs of *Lepanthopsis melanantha* and my observations may differ from Reichenbach's because my material represents one of the variants.

The gynostemium of *Lepanthopsis melanantha* is difficult to interpret because the flowers available for study are old with the subtending capsules about ready to dehisc. Unfortunately this species does not appear to be available in perfect condition. In the flowers of Wright 3342 the gynostemium has terminal stigmas. These stigmas are very small and form two erect, conical or subglobose masses which are contiguous through the centre of the clinandrium. It would seem that the generic affinity is rather with Lepanthopsis than with Pleurothallis.

CUBA, 1860-1864. *C. Wright 3342.*

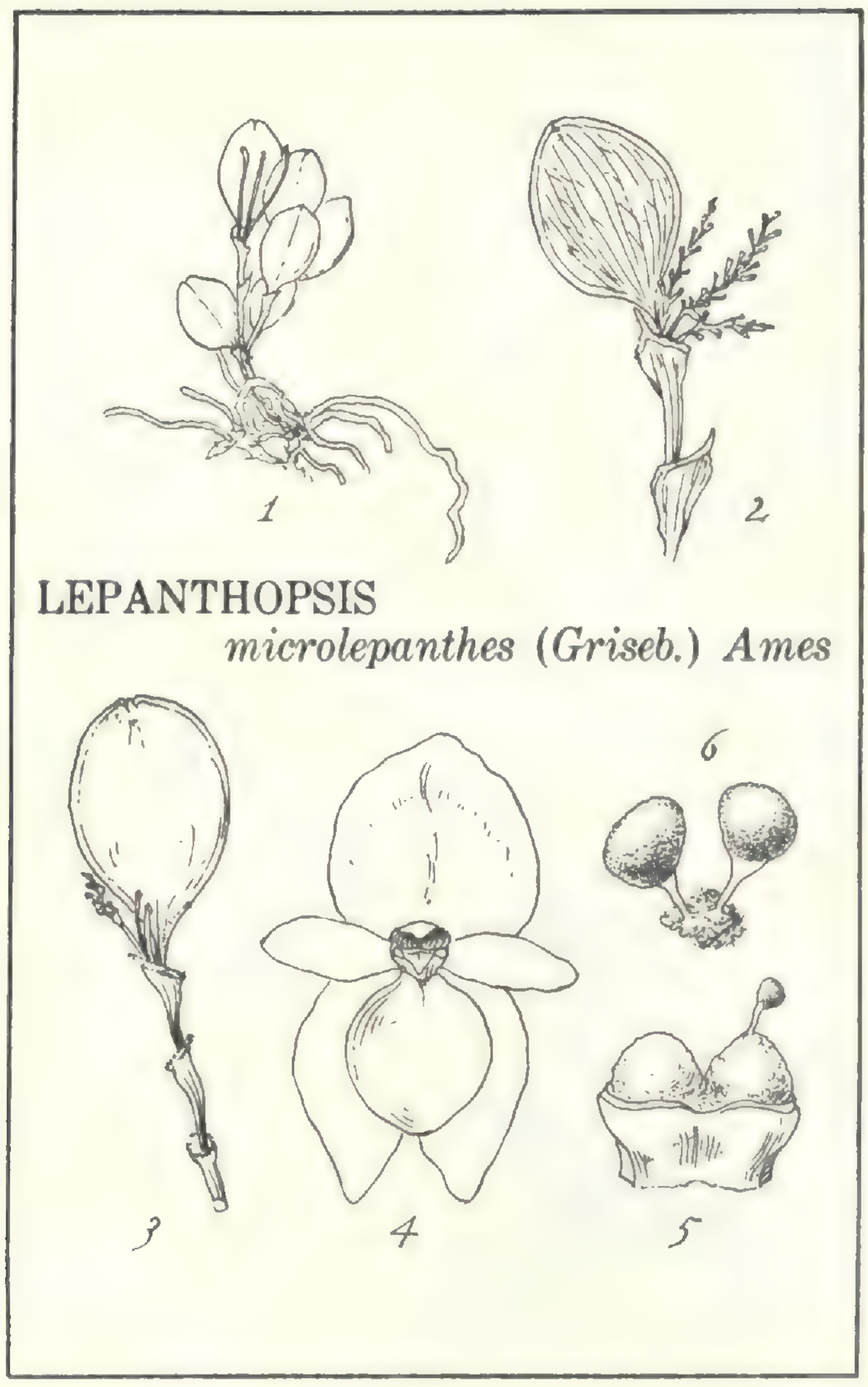
SANTO DOMINGO, Prope Constanza in sylva frondosa 1250 m. *Tuerckheim 3089* fide Cogniaux in Urb. Symb. Antill. 8 (1909) 126.

**Lepanthopsis microlepanthes** (*Griseb.*) *Ames, comb. nov.*

*Pleurothallis microlepanthes* Grisebach Fl. Brit. West Ind. (1864) 610—Cogniaux in Urban Symb. Antill. 6 (1909) 430—Fawcett & Rendle Fl. Jam. 1 (1910) 65.

My conception of this species is based on the specimens in the Herbarium of the New York Botanical Garden and on a drawing in my herbarium of the Wilson plant collected in 1857 and preserved at Kew. The gynostemium of the Cuban specimens suggests very closely the gynostemium of *L. melanantha*. The flowers of Léon, Clement & Roca no. 10371 are described as having been yellow. Lateral sepals 1 mm. long, connate for the greater part of their length, forming an ovate, apically bifid lamina which is only slightly longer than the labellum. Dorsal sepal very broadly ovate, obtuse, about 1 mm. long. Petals less than 1 mm. long, about half as long as the dorsal sepal is wide, narrowly elliptical, obtuse. Labellum obscurely or very shortly clawed, apparently sessile, orbicular, smooth, ecallose, slightly less than 1 mm. long. All the perianth organs are tenuous and without conspicuous nerves. Gynostemium minute, slightly dilated above the middle, the stigmas after pollination become much swollen and form erect, terminal, semi-globular protuberances which occupy almost the entire area of the clinandrium.

The diminutive gynostemium is very difficult to interpret from dried specimens, consequently information regarding the exact position and nature of the stigmas antecedent to pollination will have to await studies of fresh material. That the stigmas are terminal and in conformity to the generic characters herein emphasized is indicated by post-pollination developments. (cf. illustration, fig. 5). That they are lateral and, in the early stages of




LEPANTHOPSIS

*microlepanthes (Griseb.) Ames*

anthesis, confined to the anterior margin of the androclinium, as in *L. floripecten*, seems probable.

Cuba, Loma del Gato and vicinity, Cobre Range of Sierra Maestra. In woods at 1,000 meters altitude. July 11–August 14, 1921 *Léon, Clement & Roca 10371.* (Herb. N.Y. Bot. Gard.) ; same locality. July 11–August 14, 1921. *Léon, Clement & Roca 10548* (Herb. N.Y. Bot. Gard.).

Jamaica, *Macfayden: Wilson: March:* Mabess River, *Harris.*

Illustration: 1, from a drawing of the Wilson plant in Herb. Kew., natural size. 2, from a drawing of a leaf and stem of the Wilson plant (enlarged). The ciliations of the sheaths not shown. 3, leaf and stem of the Cuban plant (no. 10371) twice larger than natural size. 4, flower of the Cuban plant (no. 10371) much enlarged. 5, column of the Cuban plant (no. 10548) showing the post-pollination condition of the stigmas, much enlarged, with a pollinium attached to one of the stigmas. 6, pollinia of the Cuban plant (no. 10371) much enlarged, imbedded in the glutinous material of the rostellum.

Notes on the following illustration: The petals of *L. melanantha* as interpreted by Reichenbach are narrower and longer than those of Wright's 3342 (type number) in the Gray Herbarium, and the labellum is acuminate rather than rounded at the apex as in the specimens of Wright 3342 in the Gray Herbarium. Furthermore the petals of the Gray Herbarium specimen lack a distinct median nerve.

The enlarged drawings of the flowers and the accompanying analyses are from Reichenbach's drawings in the Reichenbachian Herbarium. With the exception of *g*, which is much reduced, all of the analytical drawings are practically equal in size to the originals.

It may be noted that the sepals in Reichenbach's drawing of *Lepanthopsis floripecten* are longer in relation to the labellum than is true of Edwards' plant. In this regard it is worthy of remark that Lindley's sketch of a flower of the Wagener plant resembles the flowers of the Edwards plant very closely. Allowance must of course

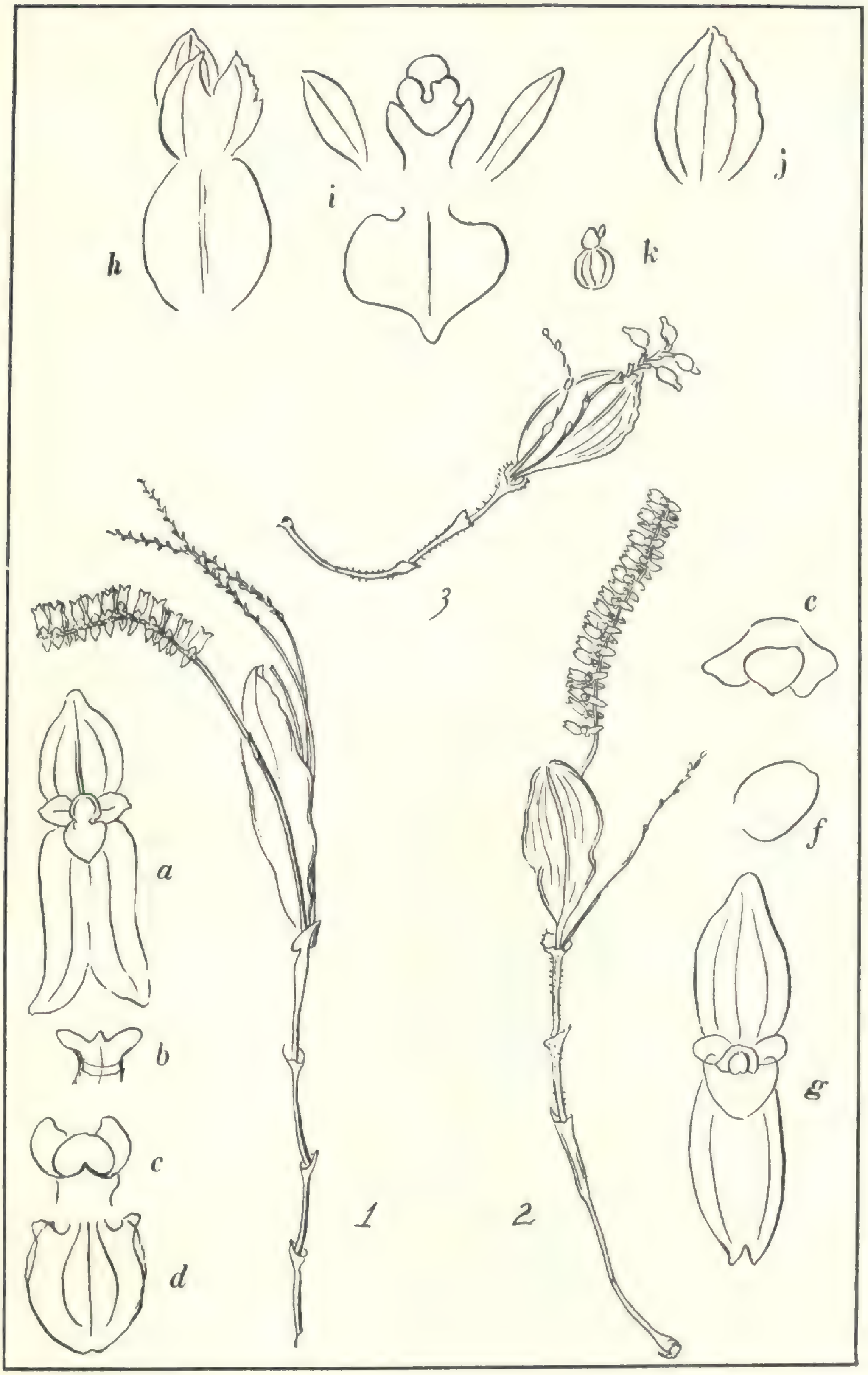
## EXPLANATION OF ILLUSTRATION

LEPANTHOPSIS FLORIPECTEN (*Reichb.f.*) *Ames* 1, plant drawn natural size from type sheet of *Pleurothallis floripecten* Reichb.f. in the Reichenbachian Herbarium. a, flower from a tracing of the original drawing. b, front view of the column. c, posterior view of the column. d, labellum.

LEPANTHOPSIS ANTHOCTENIUM (*Reichb.f.*) *Ames* 2, plant drawn natural size from a specimen in the Reichenbachian Herbarium. e, column. f, petal. g, flower (drawn somewhat smaller than the original).

LEPANTHOPSIS MELANANTHA (*Reichb.f.*) *Ames* 3, plant drawn natural size from the Wright plant, the type of *Pleurothallis melanantha* Reichb.f. in the Reichenbachian Herbarium. h, capsule with the persistent sepals. i, petals, column and labellum. j, dorsal sepal. k, flower and capsule slightly enlarged.

Figures a–k copied from original drawings made by H. G. Reichenbach.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be made in the consideration of proportions in drawings that were made free-hand and unaided by the use of a camera-lucida.

In the drawing of the plant of *L. floripecten* the margin of the open end of the sheaths does not show the ciliation that is characteristic of the species. Reichenbach described his material as densely fimbriate at the dilated mouths of the sheaths.

# SAUNDERS REFUGIUM BOTANICUM

## VOLUME II

BY

F. TRACY HUBBARD

VOLUME two of Saunders Refugium Botanicum was issued in three parts. The dates of publication are open to doubt and have been a source of confusion. Fortunately Professor Ames' copy of the second volume contains the original covers and these materially help to establish the dates, but nevertheless fail to remove entirely uncertainty regarding the actual dates of issue.

The covers bear the following dates: Part 1, June 1869 containing plates 73 to 96 inclusive; Part 2, October 1872 (corrected in ink to August 1878) containing plates 97 to 120 inclusive; and Part 3, June 1882 containing plates 121 to 144 inclusive. A discussion of the accuracy of these dates seems to be necessary.

Part 1. Although the cover and plates are dated June 1869 the first notice regarding Part 1 seems to be in the Journal of Botany, volume 8 (March 1, 1870) 60 which reads, "The first part of the second volume of Mr. Wilson Saunders' 'Refugium Botanicum' has just appeared." From the evidence at hand it would seem that Part 1 did not appear until early in 1870.

Part 2. While the plates all bear the date of October 1872 the evidence seems to indicate that Part 2 was not issued until a much later date. In the copy of volume two at the Gray Herbarium there is a paster sent out by the publishers apologizing for the late appearance of this part. Furthermore, in the American Journal of Science and Arts, series 3, volume 8 (1879) 155 a review referring to volume two is in part as follows: "There is now a second part bearing the date 1878..." Consequently, it would seem advisable to accept August 1878 as corrected on the part cover in Professor Ames' copy as the actual date of publication.

Part 3. In spite of the fact that the plates of this part are dated November and December 1872, it seems certain that Part 3 did not appear until a much later date. In Just Jahresbericht for 1882 (volume 10, part 2 (1885) 76) there is a review and abstract of this part which definitely states the date of publication as 1882, which is in accordance with the date (June 1882) given on the cover of Professor Ames' copy.

Therefore, on the evidence at hand, it would seem that Part 1 appeared early in 1870; Part 2 in August 1878 and Part 3 in June 1882.

# BOTANICAL MUSEUM LEAFLETS
## HARVARD UNIVERSITY

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## A NEW SOBRALIA FROM THE REPUBLIC OF HONDURAS


BY

OAKES AMES


AMONG the described species of Sobralia, *S. Edwardsii* is most closely allied to *S. crocea* Reichb.f., a native of Peru, differing from it in the color of the flowers and in the structure of the labellum. After pollination the ovary elongates excessively, bearing at its summit the swollen column and the withered vestiges of the tenuous perianth. This peculiarity, shared with *S. crocea*, gives the plant a remarkable and characteristic aspect. As the second flower expands, the capsule underneath the first flower, if pollination has been effected, may exceed 6 cm. in length. This condition is represented in the accompanying plate.

**Sobralia Edwardsii** *Ames, sp. nov.* Herba epiphytica, trifoliata, foliis elliptico-lanceolatis, tridentatis. Flores duo, succedanei. Sepala oblongo-lanceolata, valde apiculata, similia. Petala plus minusve membranacea, oblonga, subacuta, apiculata. Labellum elliptico-oblongum, margine inaequaliter plicatum et undulatum, basi breviter bicallosum. Discus conspicue carinatus, carinis septem valde sinuatis ornatus. Columna gracilis, leviter alata, apice lobis falcatis ornata.

Plant 26–31 cm. tall, slender, trifoliate about 2 dm. above the base, with a conduplicate finely asperate sheath

subtending each flower; sheaths tridentate at the tip, about 2 cm. long. Stems slender, about 3 mm. in diameter, partly concealed by elongated tubular sheaths. Sheaths 2–6.2 cm. long, nervose when dry, finely asperate, closely appressed, obtuse or subacute, brown-annulate at the base. Leaves 6–8 cm. apart, 7-nerved; lamina 4–14.5 cm. long, 1–3.2 cm. wide, elliptic-lanceolate, tridentate at the tip, continued below into elongated finely asperate closely appressed tubular sheaths. Inflorescence, with its subtending conduplicate bracts, arising in the axil of the uppermost leaf, 2-flowered, with the flowers opening in succession. As the second flower expands the first one is entirely withered, the remains of the perianth and column surmounting the elongate capsule. Lateral sepals 3.7 cm. long, about 8 mm. wide, pale green, narrowly lanceolate, conspicuously apiculate, lightly carinate on the outer surface along the median nerve. Dorsal sepal pale green, equal to the laterals and similar. Petals pure white, about 3.5 cm. long, 6 mm. wide, oblong, subacute, apiculate. Labellum 3 cm. long, 1.5 cm. wide, elliptic-oblong, obtuse, margin above the middle conspicuously folded or plaited in small regular undulations, unequally and inconspicuously crenulate, but not at all fringed or deeply dentate, shortly bicallose at the base, each callus bifurcate or trifurcate, with one of the divisions extending along the disc almost to the apex of the labellum and becoming conspicuously raised into a sinuate keel above the middle, in addition five of the nerves become similarly carinate, and several others become shortly carinate or bear conspicuous flattened protuberances near the margin on the distal portion of the disc. Column about 1.6 cm. long, lightly winged on the sides, with two falcate erect retrorse terminal lobes or teeth. Capsule slender, elongated, up to 9 cm. long when mature.

# SOBRALIA *Edwardsii Ames*

Republic of Honduras, Department of Cortez, El Jaral, Lake Yojoa. Epiphyte in dense forest at 2,000 feet altitude. Sepals pale green, almost white. Petals pure white. Lip white with a light yellow field marked with brown stripes, crinkled like crêpe. October 27, 1932. *J. B. Edwards 299.* (Type in Herb. Ames No. 39404.)

Illustration: Plant drawn natural size. 1, labellum. 2, petal. 3, anther. 4, column.

# A NEW BLETIA FROM MEXICO

BY

OAKES AMES AND CHARLES SCHWEINFURTH

AMONG several orchids submitted by the New York Botanical Garden for determination, the following species from the Mexican state of Chiapas appears to be undescribed. Its very slender habit serves to distinguish it from all the other members of the genus. Moreover, the small flowers with shallow sinuses between the lobes of the lip differentiate it from the nearest allies, *Bletia Pottsii* S. Wats. and *B. tuberosa* (L.) Ames.

**Bletia tenuifolia** *Ames & Schweinfurth, sp. nov.*
Herba gracilis. Cormus subglobosus. Folia quattuor vel plura, angustissime linearia. Scapus folia paulo superans, saepissime subpaniculatus. Flores laxi. Sepalum dorsale lanceolato-ellipticum, acutum. Sepala lateralia oblique elliptico-lanceolata, acuta. Petala oblique elliptica vel ovalia. Labellum in circuitu ovatum, prope apicem trilobatum; lobi laterales semiovati; lobus medius suborbicularis; discus quinquecarinatus. Columna generis.

Roots fibrous, coarse, flexuous, glabrous, longitudinally sulcate when dry. Rhizome apparently creeping. Corm subglobose, about 1.2 cm. long, rugose, shining, covered with the fibrous remains of sheaths. Leaves four to five in a cluster, very narrowly linear, articulated to convolute sheaths which in turn are loosely enveloped by several imbricating nervose scarious leaf-bearing sheaths; blades 15–33.5 cm. long, up to 3 mm. wide, complicate-acuminate, 3-nerved, erect-spreading. Scape up to 46 cm. high, somewhat surpassing the leaves, slender, concealed at base by three short imbricating nervose sheaths and above by about three remote appressed tubular sheaths. Rachis commonly subpaniculate with a single basal branch, up to 15 cm. long (the apical flowers in our

specimens consisting of immature crowded buds). Floral bracts lanceolate, long-acuminate, scarious, the lowermost about 5.5 mm. long. Raceme loose, flowers 1 cm. or more distant. Dorsal sepal lanceolate-elliptic, 1 cm. long, 4 mm. wide, acute, 5-nerved. Lateral sepals asymmetrically elliptic-lanceolate, about 9 mm. long, 3.8 mm. wide, acute, 5-nerved. Petals asymmetrically elliptic, about 9 mm. long, 4.5 mm. wide, narrowed to an obtuse or subacute apex, the margins of the upper half irregular, 3-nerved with the side nerves branching. Lip ovate in outline, 3-lobed near the apex, articulated to the short column-foot, 8 mm. long, 6.1 mm. wide, broadly cuneate at base; lateral lobes semiovate, 6.2 mm. long, lobulate at their rounded apex; middle lobe much smaller, suborbicular-quadrate, 2.1 mm. long and wide, shallowly retuse and apiculate, the margins strongly undulate and lobulate; disc traversed by five parallel keels which are highest in the middle of the lip and become undulate near their apex; the three middle keels extend about to the middle of the mid-lobe, the lateral keels stop below the base of the mid-lobe. Column arcuate, 7.5 mm. long (measuring the posterior portion); clinandrium 3-lobed. Anther semiglobose, 2-celled, each cell 4-chambered.

MEXICO, Chiapas, Rio Leche. March 22, 1933. *C. D. Mell 2084.* (TYPE in Herb. N.Y. Bot. Gard.)